

The determinants of activities within the family: a SUR-approach to time-use-studies

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Österreichisches Institut für Familienforschung
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Working Paper

Norbert Neuwirth

The Determinants of Activities within the Family

A SUR-approach to Time-Use-Studies

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A SUR-approach to Time-Use-Studies

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Abstract

Reconsidering the Work-Life-Balance discussion, a SUR-system for determining the activities' day shares is developed. Productive as well as consumptive activities are analysed in order to cover the agents' entire day course.

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1. Introduction

Within the last decade the discussion about the work-life-balance has come up and became quite central to the industrialized nations' economic and socio-political discussion. This discussion concentrates on the "dichotomy" of productive activities. Market work and family related activities are broadly discussed as competing substitutes, other activities remain disregarded. An extraterrestrial following this discussion would have come to the conclusion that mankind's' unique sense of living is to work all over the day. The extraterrestrial would wonder how, by whom and when all these commodities produced should be consumed, or, alternatively, what all this production is good for.

So, analysing a population's welfare, the scope of analysis has to be widened: The relation (and sequence) of time devoted to productive as well as consumptive activities have to be regarded. While some sequences of the life course – like retirement ages or some sequences life phases devoted primarily to education – exhibit a quite large share of the day devoted to leisure activities – and consumption happens within leisure, others are overwhelmed with productive activities. Entering labour force and taking the first steps within professional career is often accompanied with intensive market labour engagement. Building up or adapting a dwelling intensifies non-market labour – the so called home production. Giving birth to children then intensifies reproductive activities. And finally – the activity most time of the day is devoted to – the length of sleep and personal care activities varies with the age of an agent. All these activity intensities are highly interrelated. Within one particular day observed, the trade-off between these activities can be measured. The dependence of activity intensities¹ from life-events and life-phases can be worked out. And, finally, the time reallocation to a marginal shift of a determining covariate can be quantified.

Therefore a specialized analytical environment is needed. The time investment in particular activity categories has to be analysed simultaneously. Therefore a SUR-estimator² has to be developed. With this estimator vertical as well as horizontal shifts in time allocation can be captured. Shifts on the vertical axis represent the influence of the variation of a covariate on a particular activity. But variations in the intensity of one activity have to be compensated by shifts of – at least – an other. So the same initial variation of a covariate also influences – horizontally – all other activities analysed.

¹ activity's intensity = share of the day devoted to this particular activity

² SUR: seemingly unrelated regressions

Within the following chapter (2) comparable approaches to time use analysis are reviewed. In chapter 3 the underlying theoretical model will be discussed, followed by a short description of the dataset used (4). The econometric approach as well as the main results are discussed in chapter (5). Please note that only the condensed regression tables are in the text. A comprehensive set of descriptive statistics and detailed regressions, the interpretation refers to, is appended in A.2 Additional Estimators and Descriptive Statistics. A discussion in (6) concludes this paper.

2. Comparable Approaches within Time Use Studies

The idea of estimating the activity intensities simultaneously has a long tradition. It is not limited to time use research, although time use studies play a prominent role in this field. Lundberg (1988) for instance estimates the effective labour supply of husbands and wives simultaneously in order to identify interaction effects between the partners' workforce engagement. Graham/Green (1984) develop a model of household production, where a concept of "joint production" – that is, the degree to which time devoted to home production simultaneously serves as leisure – is examined.

An important contribution came from Biddle/Hamermesh (1990). They construct a simultaneous equation system on the two most intensive activities: market labour and sleep. These activities are referred to all non-market waking time. In a reduced form the effects of wage resp. non-labour-income are computed for sleep and non-market waking time. Increases in wages seem to reduce sleep and napping time for both sexes (Appendix - Table 1), but in case of men the expected reduction of sleep seems to become overcompensated by the growth of non-market waking time. Women seem to react in the opposite direction in some respect: Although their reduction is also negative, the extent is much smaller. Non-market waking time is also reduced remarkably, so women seem to show up a dominating substitution effect (in view of labour supply), while the income effect seems to dominate in case of men. With these results Biddle/Hamermesh (1990) are quite consistent to standard research on labour supply, indicating that "men's supply of work is much less sensitive to wage rates than women's. The implied labour supply elasticity for men is 0.021, essentially zero, while for women it is 0.191, positive but not very large"³. Nether the less, the standard errors of the estimated effects of wage changes are considerably large, even too large to permit reliable inferences about their signs. The effects of income from other sources stay economically as well as statistically insignificant.

Hallberg/Klevmarken (2003) introduced a simultaneous equation estimator on parent's time for their children. This work became soon quite famous. The approach is not a fully specified structural model on parents' preferences, partners' interactions and derived demand functions, but rather a model "recognizing the joint dependence of time allocated to different activities and the interdependency of spouse's time-use"⁴. Although this approach

³ Biddle/Hamermesh (1990) p.939

⁴ Hallberg/Klevmarken (2003) p.214

considerably differs from the more comprehensive claim formulated in an earlier draft⁵, this approach motivated other researchers to construct comparable estimators. The interdependency of both spouse's market work and child care intensity became evident. "If one parent works long hours in the market, the other substitutes at home with the children to some degree. The results suggest that a change in the mother's working hours has less influence on parents' time with their children than a change in the father's working hour. The degree of substitution seems to have become smaller as more women work full time and out-of-home child care has become readily available. Instead, the strong jointness in parents' allocation of time to their children has become relatively important. Parents prefer joint activities with their children."⁶ This result can only be partly derived from the estimators, as these do not control for joint activities per se. It is rather derived from the fact that the coefficients on partner's child care intensity turned out to be positive, close to unity and highly significant (Appendix - Table 4). On the other hand the estimators "do not suggest that parents chose out-of-home child care as a substitute for their own time with children. There is no significant difference in time allocation between families with and without out-of-home child care."⁷ Hallberg/Klevmarken hypothesise that institutional child care is chosen in order to foster the parents' labour market participation, but "to combine work and time for children, they have to cut down on private leisure and household work."⁸ Economic incentives (wage rate and other income sources) primarily have indirect influence on child care via the labour market participation decision.

The Hallberg/Klevmarken-estimator motivated Neuwirth (2004) to run a comparable procedure on the Austrian time use survey data from 1992. Although file structure and contents differ in many respects⁹, quite comparable results were achieved. Like in the Swedish case, the partner's child care intensity also has a positive influence on the own child care time, but the coefficients are considerable smaller. This indicates some preference for joint child care activities, but in case of mothers this even does not turn out to be significant (Appendix - Table 4). The influences of market work on child care are comparable regarding the direction of the effect. Generally Austrians do not seem to be that egalitarian as Swedish parents are. For this reason – among others – large differences in the activity-parameters' extent and their significance levels can be seen.

⁵ Hallberg/Klevmarken (2001)

⁶ Hallberg/Klevmarken (2003) p.223

⁷ *ibid.*

⁸ *ibid.*

⁹ For instance there is exactly no information about earnings in the Austrian file. For the estimating procedures in this article the file was linked to the Mikrozensus-waves 1991-3 and 1993-2, where at least wages were surveyed. For details see chapters 4 and 1.5.3. Further, it was not surveyed, whether the children had been in a day-care-center on the diary day.

Following three main goals Kimmel/Connelly (2006) construct a SUR Tobit-type approach on analysing activity intensities: First, they determine whether child care should be rather assigned to home production or leisure. They clearly find out that neither of these two categories is appropriate: Following Gronau's (1977) statement that two categories can be summarized in one when “(a) the two elements react similarly to changes in the socio-economic environment and therefore nothing is gained from studying them separately; and (b) the two elements satisfy the conditions of a composite input, that is, their relative price is constant and there is no interest in investigating the price of the output”¹⁰, they reject the broadly applied assumption that child care can be summarized within one of these activity categories. In their econometric approach (Appendix - Table 5) child care rather behaves similar to market work, but clearly distinguishes from leisure resp. home production. Therefore, child care does not take the ‘middle road’ between leisure and home production – it clearly stands for its own. Furthermore, child care is clearly less fungible compared to home production or leisure: While some home production tasks can be shifted to the weekend, and some leisure activities are bounded to weekends anyway, most child care tasks have to be done ad-hoc. Kimmel/Connelly consider this fact as third reason why child care should be treated as a fourth main activity category.

Second, Kimmel/Connelly elaborate the influences of demographic variables on time use patterns. Weekdays’ child care time of married women differs significantly from child care intensities of the unmarried. On the other hand, weekends’ time allocation does not differ much regarding marital status.

Third, the wage and price effects on child care as well as on the three contrast activities are examined (Appendix - Table 7): The direction of the reaction to wage changes fits to theoretical assumptions: Employment rises; home production and leisure fall inelastically with wage increases, while personal child care reacts positively and elastically. Home production reacts with reverse signs on weekends, indicating that reduced home production due to risen labour participation is compensated on weekends. The price effects of child care fees are much less significant. This is partly due to the fact that these fees had been imputed from alternative data sets. Anyway, the estimates show a significant relation of pre-school child care prices on labour participation: Higher fees induce a reduction in weekdays’ employment, but increase paid work hours on weekends.

The equations exhibit throughout negative correlations between all categories, except child care and home production on weekdays. This is basically due to the fact that all activities are

¹⁰ Gronau (1977) p1100

competing substitutes on each time slot observed, although they can indeed be functional complements.

Another well elaborated simultaneous equation estimator on the substitutionability of all activities is depicted in Deding/Lausten (2006). The authors test for (1) Becker's comparative advantages approach, where partners specialize in certain activities and hence rise productivity, (2) an assortative mating model, where partners are likely to be equal regarding their human capital endowments so no productivity differentials should exist, Chiappori's collective model (3) and finally a doing-gender approach (4). These approaches are supported quite differently by the GLM-estimators applied (results in Appendix - Table 2). Like Hallberg/Klevmarken (2003) and Neuwirth (2004) this approach focuses on intra- and interpersonal substitutionabilities. The main difference to these articles is the fact that Deding/Lausten impose a simultaneous equation estimator for both productive activities defined by Gronau (1977), labour and home production, but also exclude leisure¹¹. In an extension they also introduce child care as third category, but this extension does not change the former estimators qualitatively. Deding/Lausten separate analytically own time (intra-personal) substitution from cross-spouse/same activity substitution and double-cross-substitution (between spouses and across activities). The own time substitution is generally expected to be negative. This can be confirmed except for some coefficients in the child care equation (Appendix - Table 3). Positive coefficients for cross-spouse/same activity substitution for paid work reveal dominating bargaining or comparative advantages (not distinguishable in this respect) while the insignificant outcomes in the other substitution areas (housework and child care) are likely to be interpreted as confirmation of the doing-gender approach. This approach is also supported by the fact that men do not significantly improve their home production as a response to an increase in their spouses paid work, but females do indeed. Generally theories of assortative mating and doing gender are supported, while comparative advantages and bargaining can not be confirmed.

¹¹ This approach still differs from the Becker (1965) model, because leisure is considered as missing variable that is instrumentalized in the estimator.

3. The Theoretical Model

The traditional economic approach for analysing labour supply focuses in an individual utility function of consumer goods and services, subject to budget constraints. In 1965 Becker contributed a fundamental new approach, where goods and services bought on the market are themselves just inputs to utility-gaining commodities. In order to transform these goods and services to commodities, consumer's time is needed as a second input. Therefore, the agent's time – either working in the market or transforming goods to commodities – is regarded as productive throughout.

The underlying behavioural model of this paper is built on Gronau's (1977) critique on Becker's approach. Gronau stated that Becker's distinction of productive input for generating commodities in (market) labour and consumer's time "is of little help where it is most needed, namely, in the analysis of time-budget data"¹². As consumer's time is needed to transform market goods to commodities as well as to consume them afterwards, these two processes have to be separated. In general, "two categories can be summarized in one when "[1] the two elements react similarly to changes in the socio-economic environment and therefore nothing is gained from studying them separately; and [2] the two elements satisfy the conditions of a composite input, that is, their relative price is constant and there is no interest in investigating price of the output. Both assumptions are suspect. Recent time budget findings have established that work at home and leisure are not affected in the same way by changes in socio-economic variables"¹³. In addition, the general question arises, whether productive and consumptive activities should be aggregated.

Gronau extended Becker's model to three activity categories: Leisure, home production and (market) work, but basically both conditions stated above submit reasons to widen the number of activity categories. Elements of home production (say, cooking and gardening) are expected to react differently to changes in the socio-economic environment. Also prices for substitutional purchases on the market will affect the components differently, as these components are no (at least: not entirely) composite inputs to a final commodity. Finally these activities, although productive, also generate direct utility (positive or negative). Therefore a distinction in – pure – productive and consumptive activities can not be held any further. Following Gronau's conditions closely would lead to a situation, where nearly every activity observed would have to be analysed separately. In order to keep the analytical model

¹² Gronau (1977) p 1100

¹³ *ibid.*

as small as possible, these two conditions are relaxed in favour of another: [3] Activities are aggregated by the functional way they influence the agents' utility level.

Supposing an altruistic agent, who yields utility from commodities, process benefits and the other family members' welfare, the optimisation problem can be stated as:

$$\begin{aligned} \max U_i(C, t_k, U_j) \\ j \neq i; k \in \{ML, HP, CC, AL, RC\} \end{aligned} \quad (1)$$

Market labour (ML) as well as home production (HP) enter the welfare function directly as well via the home production function¹⁴. As commodities are used to be public for all family members, the altruistic agent gains utility directly as well as indirectly from them. Care activities (CC) influence as process benefits, but also show the reflexive component via the welfare increase of the individual altruistically cared for¹⁵. Active leisure activities (AL) seemingly exhibit the same functional form like care. As some leisure activities are – or have to be – taken jointly, more agents' utility can be affected. Solely the activity category personal care and recreation (RC) exhibits process benefits¹⁶ only.

This optimisation process is subject to time as well as income constraints

$$\begin{aligned} \text{s.t. [a]} \quad C &= c(t_{HP}^i, (w^i t_{ML}^i + Y)/p) \\ \text{[b]} \quad T &= t_{ML}^i + t_{HP}^i + t_{CC}^i + t_{AL}^i + t_{RC}^i \end{aligned} \quad (2)$$

where constraint [a] describes the home production function, while [b] simply states that the amount of time is fixed to 24 per day. First order conditions show optimal time allocations by

¹⁴ For simplicity, commodities are assigned to be intra-household public goods.

¹⁵ Mostly the individuals cared for are children, but also care for elder and disabled persons is regarded.

¹⁶ Of course a second-round indirect effect is also present: As A's utility increases by his personal care activity, altruistic agent B's utility will rise. This rise will influence A's again. The model just regards first round effects.

$$\begin{aligned}
 & \frac{\partial U^i}{\partial t_{ML}^i} + \left(\frac{\partial U^i}{\partial C} + \frac{\partial U^i}{\partial U^j} \frac{\partial U^j}{\partial C} \right) \frac{\partial C}{\partial t_{ML}^i} \frac{p}{w^i} = \\
 & \frac{\partial U^i}{\partial t_{HP}^i} + \left(\frac{\partial U^i}{\partial C} + \frac{\partial U^i}{\partial U^j} \frac{\partial U^j}{\partial C} \right) \frac{\partial C}{\partial t_{HP}^i} = \\
 & \frac{\partial U^i}{\partial t_{CC}^i} + \frac{\partial U^i}{\partial U^j} \frac{\partial U^j}{\partial t_{CC}^i} = \\
 & \frac{\partial U^i}{\partial t_{AL}^i} + \frac{\partial U^i}{\partial U^j} \frac{\partial U^j}{\partial t_{AL}^i} = \\
 & \frac{\partial U^i}{\partial t_{RC}^i}
 \end{aligned} \tag{3}$$

The behavioural model results in a time/activity demand function that can be generalized to

$$t_k^i = f(w^i, \mathbf{p}, Y | P^i, P^j, H, D) \tag{4}$$

where each activity's demand is determined by the agent's wage rate, the price vector, and non-labour income. Further it is driven by the agent's and – as the agent shows some altruism – other family members' preferences and endowments, the household structure and endowments (existing partner, number and age of children, family and social networks) and the particular day investigated.

4. Data

For this analysis the 'recent' Austrian time use survey (AutTUS 1992) is used. It was conducted as a special program within the Austrian microcensuses surveyed in March 1992 and September 1992. The spring and autumn wave were selected to control for seasonality¹⁷. As the main holiday season was not surveyed, mainly standard weekdays and weekends were captured.

According to international standards of time use research, a diary system was developed. The day course was separated in more than 230 activities, captured in 84 time slots per day. In-between 23:00 – 4:00 30 min slots were surveyed, while the main waking time (4:00 – 23:00) was split in 15-minutes slices. Primary as well as secondary activities were surveyed. For every time slot the additional question "with whom did you do this activity" was asked. The Austrian time use survey did pioneering work by installing the additional item "for whom did you do the activity". With this item intra- and interhousehold networks were depicted. Besides the diary information, demographic items and items regarding labour status were surveyed.

The Austrian Microcensus covers a sample size of approximately 24000 households or 56000 persons. From this sample, a subsample of 25233 individuals aged above 10 returned valid diaries. With this high response rate the Austrian TUS 1992 gives a valid proxy of time use behaviour of the Austrian population.

A comprehensive number of demographic and economic covariates were surveyed with the TUS. Besides the standard items every microcensus wave exhibits, a number of items describing the infrastructure around the household were collected. The distance description¹⁸ is a highly valuable source for building infrastructure-indicators. Information on institutional child care facilities as well as prices were also collected, but, as the information could not be surveyed for each child – just children above 10 were surveyed; institutional child care is restricted to nominal information.

¹⁷ The microcensus is drawn from a rotating sample – every quarter's survey wave an eighth of the previous sample is replaced by new respondents, so a household should stay for 2 years in the sample. For that reason an overruling criterion, when a household was asked to fill in the diary part, had to be met: households, whose head of household was born in between January and June were asked to fill in the diary in March, while the other households were bound to the September wave. For that reason each household was asked to fill in the diary just once.

¹⁸ For example "How long do you have to travel to get to the next grocery store/shopping mall"

In order to do the rather specialised analysis described above, some data imputation procedures had to be established. First, missing information about the household structure had to be imputed. This was done by linking the household structure of the microcensus wave 1992q2 (labour force survey) to the TUS that was surveyed in the two neighbouring quarters. Given the household was also surveyed in this particular quarter, all information about the household could be gathered. Nearly the same procedure was employed to respecify the individuals' labour market status.

Most important, the wage imputation procedure had to be handled in a more sophisticated way. Neither the TUS nor the labour force survey in microcensus 1992q2 had an income-item implemented. The income item was surveyed in a two-year interval, September 1991 and June 1993. Therefore this information was linked from these waves. Next, these wages were discounted by the aggregated nominal wage increase rate to the level of 1992. The Austrian national statistics institute had run a couple of wage-imputation procedures itself. For that reason some professional status groups¹⁹ were entirely endowed with valid wage information. Others showed significant shares of missing values. Last, persons currently out of labour force had to get opportunity wages assigned. For these individuals Heckman's procedure was implemented²⁰.

Finally, the five activity categories described above were aggregated from the primary activities surveyed. Some time slots exhibiting missing values were imputed by the activity-values of their next neighbours²¹. Similarly commuting time was reassigned by the neighbouring activity categories.

Throughout the analysis, the following categories will be used:

Table 1: Activity Categories

| SHORT | NAME | DESCRIPTION | type |
|-----------|------------------------|-----------------------------------------------------------------------------------------|--------------------|
| MW | market work | all paid work; time to get prepared to work (commuting, day-planning etc.); educational | <i>productive</i> |
| HP | home production | all housework (cooking, cleaning, gardening, shopping, etc) except careing | |
| CC | child & elder care | all reproductive activities: careing for the youngest, sick, elderly | |
| AL | active leisure | all leisure and consumption activities, eating | <i>consumptive</i> |
| RC | recreation & pers.care | sleeping, bathroom activities | |

¹⁹ mainly retirees and civil servants

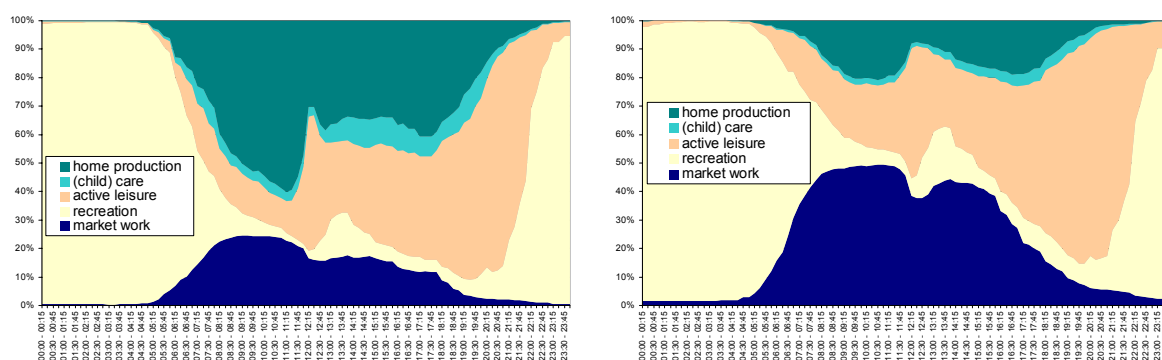
²⁰ for gendered wage equations see Appendix - Table 8f

²¹ Nearly no missing values were in the data. Some were found for time slots on the last position of the diary's page – the respondents had simply overseen this last line.

5. Empirical Analysis

Having assigned all activities to the five categories above, the average day course²² reduces to Figure 1. Throughout the analysis, the day course resp. the activity-intensities of adults living in a partnership will be investigated. As partners try to improve their wealth by specialising each in certain activities, the distribution of activities or even the distribution of aggregated activity categories will shed a light on socialized division of productive and consumptive activities more sharply than a comparison over the whole population does.

Figure 1: Partners' Day Course²³



In order to employ contrast points for having children, also pairs with no children within the household are included. Keeping this in mind, the comparably small area of (child) care activities can be explained. As the analysis neither concentrates on weekdays nor on weekends, the fraction engaged in labour market activities seems to be low compared to workforce statistics²⁴.

5.1. Activities' Intensities

Summing up the areas of the five activity categories as shown in the tempograms in Figure 1 to average hours per day, the structural differences of the sexes' day course appear more clearly. These "intensities of activities" or fractions of a day devoted to an activity category (Figure 2), as well as their determinants will be studied more in depth now.

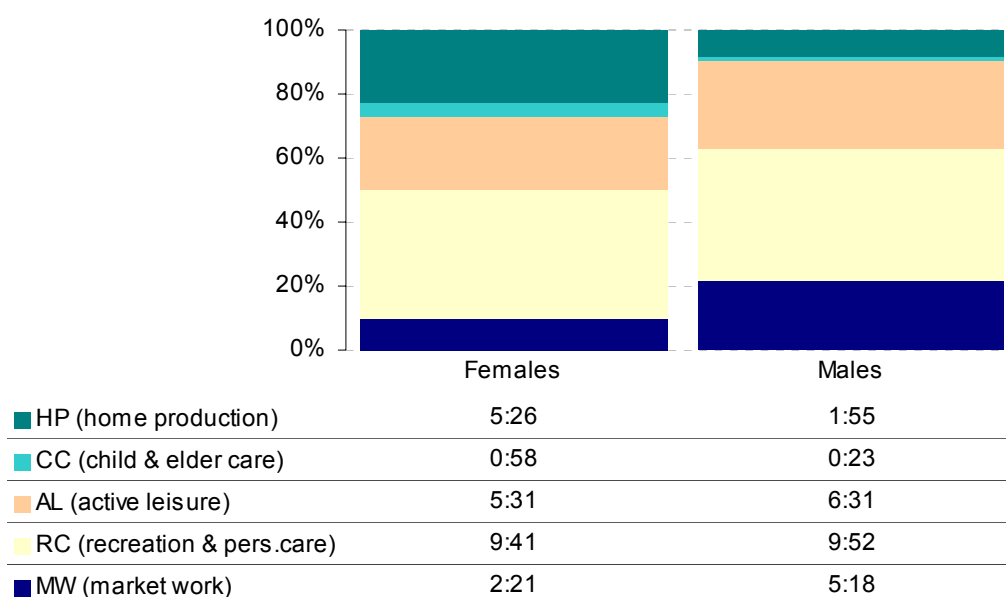
²² see Appendix - Figure 1 for an illustration of the average day course by disaggregated activities

²³ Females on the left (throughout the paper)

²⁴ It is a stylized fact that labour force statistics tend to overdraw the real aggregated market labour participation observed in hours.

The most striking fact is revealed when looking on the consumptive categories first: Male partners exhibit exactly one hour per day more active leisure and additionally 11 minutes more time for recreation and personal care. Therefore, they spend about 70 minutes per day less on productive activities. Although the share of males' market work is twice as high compared to females', women overcompensate this by productive activities within the household and reproductive care.

Figure 2: The day is divided into ...



5.2. How Do Activities Correlate?

Comparing means by gender reflects structural differences, while looking at the correlations gives the first glue about the functional relationships²⁵ of activities²⁶. First, the intrapersonal correlations will be examined (Table 2). Surprisingly, market labour and home production correlate to exactly the same extent for both sexes. Comparing productive to reproductive activities a slightly sharper correlation occurs for females, simply corresponding to the fact that women spend more time to child and elder care. Also comparing the correlation of reproductive to consumptive activities shows an even sharper relation for females. Active leisure activities correlate more heavy to market work in case of males, but the other productive activity – home production seems not to interrelate with leisure. Similarly, the

²⁵ It has to be mentioned that, as we are correlating activities measured as shares of a day, the correlation coefficient generally has to be negative.

²⁶ From here on „activities“ stand for the five aggregated activity categories. Disaggregated activities will be left disregarded

correlation of market work to recreation time shows a more significant extent in case of males.

Table 2: Correlation of Own Activities

| Females | ML | HP | CC | AL | RC | Males | ML | HP | CC | AL | RC |
|----------------|-------|--------|--------|--------|--------|--------------|-------|--------|--------|--------|--------|
| ML | 1.000 | -0.478 | -0.186 | -0.501 | -0.354 | ML | 1.000 | -0.478 | -0.127 | -0.737 | -0.586 |
| HP | | 1.000 | -0.032 | -0.254 | -0.160 | HP | | 1.000 | -0.020 | -0.007 | 0.047 |
| CC | | | 1.000 | -0.219 | -0.171 | CC | | | 1.000 | -0.068 | -0.039 |
| AL | | | | 1.000 | 0.089 | AL | | | | 1.000 | 0.195 |
| RC | | | | | 1.000 | RC | | | | | 1.000 |

Interestingly recreation and home production seem to correlate slightly positive in case of males. Also active leisure and recreation shows some positive values for both sexes. This is a typical age effect. High aged males contribute more to home production, as a larger fraction of these males has to substitute some productiveness of their – high aged – partners. The elder the household, the more likely a person has to substitute activities of the disabled partner. As both partners are used to be retired, this effect just hits home production. Also the positive relationship of active leisure and recreation time is age dependent. The elderly are out of labour force, have more time for leisure and have to rest and sleep more.

Table 3: Cross-Correlation of Partners' Activities

| | | Females | | | | |
|--------------|----|----------------|---------------|---------------|---------------|---------------|
| Males | | ML | HP | CC | AL | RC |
| | ML | +0.374 | +0.049 | +0.200 | -0.453 | -0.333 |
| | HP | -0.110 | +0.151 | -0.122 | +0.018 | +0.077 |
| | CC | -0.048 | -0.068 | +0.302 | -0.049 | -0.005 |
| | AL | -0.306 | -0.147 | -0.214 | +0.571 | +0.179 |
| | RC | -0.246 | -0.017 | -0.139 | +0.166 | +0.405 |

Additional insight is given by the cross-correlation table of partners activities (Table 3). First, the same-activity correlations (on first diagonal) exhibit substantial positive values. All these relationships primarily exhibit a strong level effect. Consumption activities correlate heavily due to the age effect again, but also productive activities seem to be bound to life-phase dependent variations: With small children both partners are – in relation to their average gender-specific participation – highly involved. Even in case of labour market participation, agents – especially young pairs without children – tend to work more jointly on the market. Home production exhibits the weakest correlation.

We see equal signs for all consumption activity correlations, but seemingly inverse relationships for productive ones²⁷. From this table it seems that shifting males' productive activities to market work is substituted by a rise in females' home production and care, while an increase in females' market labour is (over)compensated by market substitutes. But also the life phase effect comes to effect: As children grow up, child care as well as home production reduces generally. At this time even most male-breadwinner-oriented households start to supply female's market labour. More significant seems the inverse relation in case of home production: While an increase of men's home production marginally raises women's consumptive activities, an additional rise in women's home production reduces the males' consumptive activities.

5.3. Econometric Approach

The next and most important step is to analyse the dependence of the activity-intensities by structural covariates. Significant relations of activities to these covariates are depicted in the Appendix (pp36 ff), where for every activity six pages with details on the particular regressions, a graphical depiction of the univariate distribution as well as the dependence on number of children, age cohort and education level, and bivariate descriptives are edited.

Before, a number of remarks have to be stated. The linear SUR-system depicted in Table 4 and Table 5 is bounded to strict properties. As we are estimating shares of the day, the units of measurement per day (say, 24 hours per day) will equal the sum of intercepts²⁸. The sum of coefficients of the same covariate over all activities is expected to be zero.

$$\mathbf{y} = \mathbf{X}\boldsymbol{\beta} + \boldsymbol{\varepsilon}$$

$$\boldsymbol{\beta} = \begin{matrix} \beta_0^{ML} & \dots & \beta_0^{RC} \\ \beta_1^{ML} & \dots & \beta_1^{RC} \\ \dots & \dots & \dots \\ \beta_n^{ML} & \dots & \beta_n^{RC} \end{matrix} \quad (5)$$

$$E(\sum_i \beta_0^i) = T; \quad E(\sum_i \beta_0^i) = 0$$

$$i = \{ML, HP, CC, AL, RC\}$$

²⁷ values in red resp. blue

²⁸ all estimators are normed to hours, so all marginal effects depicted in the regression tables have to be interpreted as "the variation of \mathbf{x} of one unit changes the activity intensity by \mathbf{y} hours"

Regarding these properties of the linear SUR estimator, each activity's regression is analysed and compared to the partners' results. The following interpretation focuses on the most relevant relationships; the interpretation of the influence of all other covariates on particular activities is left to the reader. Within the following five subsections, mainly the vertical relationship (within an activity category) will be interpreted. Interpreting consumptive activities, also the horizontal relationship to productive activities will be regarded.

Table 4: Females' SUR Results²⁹

| | | MW | sig. | HP | sig. | CC | sig. | AL | sig. | RC | sig. |
|---------------------|----|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|
| (Intercept) | | 5.4900 | [***] | 1.6672 | [***] | 2.2986 | [***] | 4.0935 | [***] | 10.4592 | [***] |
| WEEKEND | | -1.8025 | [***] | -0.9838 | [***] | -0.2701 | [***] | 2.2175 | [***] | 0.8392 | [***] |
| AGE | | -0.0401 | [*] | 0.1408 | [***] | -0.0540 | [***] | 0.0179 | | -0.0647 | [***] |
| I(AGE^2) | | -0.0004 | | -0.0011 | [***] | 0.0004 | [***] | 0.0002 | | 0.0009 | [***] |
| ED.APP | | 0.2893 | [***] | -0.1847 | [**] | -0.0380 | | 0.0133 | | -0.0799 | |
| ED.VOC | | 0.6213 | [***] | -0.4843 | [***] | 0.1312 | [**] | -0.0996 | | -0.1687 | [**] |
| ED.MAT | | 0.1739 | | -0.8319 | [***] | 0.0694 | | 0.6098 | [***] | -0.0329 | |
| ED.UNI | | 0.8176 | [***] | -1.1100 | [***] | 0.4425 | [***] | -0.0411 | | -0.1159 | |
| SEMPLS | | 1.6116 | [***] | -0.5833 | [***] | -0.1336 | [**] | -0.6563 | [***] | -0.2400 | [***] |
| HEMPLS | | 0.8092 | [*] | -0.7672 | [**] | -0.0884 | | 0.1054 | | -0.0514 | |
| P.AGEDIF | | -0.0395 | [***] | 0.0124 | [*] | -0.0055 | | 0.0227 | [***] | 0.0100 | [**] |
| ED.HIGHA | | 0.1571 | | -0.0311 | | -0.1971 | [**] | 0.0194 | | 0.0598 | |
| P.SEMPLS | | 0.3880 | [**] | -0.0666 | | -0.0237 | | -0.2966 | [***] | 0.0000 | |
| P.MEMPLS | | -0.4516 | [***] | 0.1700 | [**] | 0.0667 | | 0.2005 | [**] | 0.0141 | |
| P.HEMPLS | | -0.5855 | [***] | 0.5130 | [***] | 0.0456 | | 0.0384 | | -0.0055 | |
| P.CIT.Y | | 1.1375 | | 0.4681 | | -0.2465 | | -0.6766 | | -0.7026 | |
| P.CIT.T | | 2.6388 | | 0.1356 | | -1.4184 | [*] | -0.8219 | | -0.5350 | |
| HOMEOWN | | -0.1354 | | 0.3091 | [***] | 0.0977 | [*] | -0.3145 | [***] | 0.0408 | |
| HOMESIZE | | -0.0021 | [*] | 0.0009 | | 0.0001 | | 0.0011 | | -0.0001 | |
| HOME2OWN | | 0.0963 | | -0.0955 | | -0.0706 | | -0.0300 | | 0.1003 | |
| CAROWN | | -0.1619 | | -0.0178 | | 0.0439 | | 0.1948 | [**] | -0.0567 | |
| CAR2OWN | | 0.8514 | [***] | -0.2721 | [***] | -0.0800 | [*] | -0.3001 | [***] | -0.1993 | [***] |
| DISAPERS | | -0.1000 | | -0.1637 | [**] | 0.1859 | [***] | -0.1928 | [***] | 0.2710 | [***] |
| PHHELP.H | | 0.2762 | | -0.9034 | [***] | 0.0978 | | 0.4104 | [**] | 0.1138 | |
| UHHELP.H | | 0.8026 | [***] | -0.4227 | [***] | -0.0366 | | -0.3586 | [***] | 0.0150 | |
| CITY | | 0.4973 | [***] | -0.5776 | [***] | 0.0417 | | -0.0145 | | 0.0480 | |
| LANDSIDE | | -0.6777 | [***] | 0.4893 | [***] | -0.0153 | | 0.2639 | [**] | -0.0581 | |
| WESTERN | | -0.1761 | [*] | -0.1003 | | -0.0505 | | 0.3422 | [***] | -0.0138 | |
| CIT.Y | | 0.5929 | | -1.1304 | | -0.0482 | | 0.0342 | | 0.5703 | |
| CIT.T | | -2.6510 | | -0.8876 | | 1.4846 | [**] | 0.4413 | | 1.6145 | [*] |
| C2.D | | -2.3144 | [***] | 0.7104 | [***] | 1.8256 | [***] | -0.2170 | [*] | -0.0075 | |
| C2_3.D | | -0.6524 | [***] | 0.3599 | [**] | 0.5683 | [***] | -0.2126 | | -0.0598 | |
| C4_6.D | | -1.0569 | [***] | 0.3840 | [***] | 0.8875 | [***] | -0.1251 | | -0.0920 | |
| C7_10.D | | -0.8313 | [***] | 0.5266 | [***] | 0.5268 | [***] | -0.0504 | | -0.1696 | [***] |
| C11_15.D | | -0.4818 | [***] | 0.6942 | [***] | -0.0451 | | -0.0939 | | -0.0745 | |
| C16_20.D | | -0.1835 | | 0.4802 | [***] | -0.0621 | | -0.2449 | [***] | 0.0067 | |
| C21_27.D | | -0.4970 | [***] | 0.8791 | [***] | -0.1015 | [*] | -0.2642 | [***] | -0.0157 | |
| ICC.FT | | 0.9490 | [***] | 0.0949 | | -0.0781 | | -0.8749 | [***] | -0.0871 | |
| ICC.PT | | -0.4260 | [*] | 0.1517 | | 0.1925 | [**] | 0.0834 | | -0.0080 | |
| working.age | | 0.9104 | [***] | -0.2515 | | -0.1443 | [*] | -0.4260 | [***] | -0.0902 | |
| HWAGE2 | | 0.0010 | | -0.0001 | | -0.0011 | | -0.0001 | | 0.0002 | |
| R ² | SE | 0.2400 | 3.10 | 0.1340 | 2.52 | 0.3890 | 1.28 | 0.2330 | 2.34 | 0.1580 | 1.60 |
| adj. R ² | N | 0.2340 | 5522 | 0.1280 | 5522 | 0.3850 | 5522 | 0.2270 | 5522 | 0.1520 | 5522 |
| F-test | df | 43.6 | 41 | 21.4 | 41 | 87.9 | 41 | 41.9 | 41 | 25.9 | 41 |

²⁹ Signif. codes: 0 '[***]' 0.001 '[**]' 0.01 '[*]' 0.05 '.' 0.1 '.' 1

Table 5: Males' SUR Results³⁰

| | | MW | sig. | HP | sig. | CC | sig. | AL | sig. | RC | sig. |
|---------------------|----|---------|--------|---------|--------|---------|--------|---------|--------|---------|--------|
| (Intercept) | | 7.9486 | [****] | -0.3146 | | 0.7723 | [****] | 4.3543 | [****] | 11.2625 | [****] |
| WEEKEND | | -4.3863 | [****] | 0.1444 | [*] | 0.1326 | [****] | 3.0556 | [****] | 1.0514 | [****] |
| AGE | | 0.0061 | | 0.0545 | [***] | -0.0181 | [**] | 0.0268 | | -0.0700 | [****] |
| I(AGE^2) | | -0.0014 | [****] | -0.0002 | | 0.0002 | [**] | 0.0004 | [*] | 0.0011 | [****] |
| ED.APP | | -0.1246 | | 0.0554 | | -0.0250 | | 0.3076 | [***] | -0.2139 | [****] |
| ED.VOC | | 0.2618 | | -0.1915 | | 0.0089 | | 0.3645 | [**] | -0.4583 | [****] |
| ED.MAT | | 0.0022 | | -0.0518 | | -0.0224 | | 0.3492 | [*] | -0.2839 | [**] |
| ED.UNI | | -0.2370 | | -0.0841 | | 0.0405 | | 0.6785 | [***] | -0.4130 | [***] |
| SEMPLE | | 1.3636 | [****] | -0.5946 | [****] | -0.0472 | | -0.5862 | [****] | -0.1431 | [*] |
| HEMPLE | | 0.4267 | [*] | -0.2063 | | -0.1333 | [**] | -0.2383 | | 0.1335 | |
| P.AGEDIF | | -0.0351 | [***] | 0.0162 | [**] | -0.0021 | | 0.0137 | [*] | 0.0074 | |
| ED.HIGHA | | 0.1374 | | -0.0635 | | 0.0313 | | 0.0396 | | -0.1335 | |
| P.SEMPLE | | 1.0421 | [****] | -0.2711 | [**] | 0.1022 | [**] | -0.6206 | [****] | -0.2548 | [***] |
| P.MEMPLE | | 0.1067 | | 0.0153 | | 0.0082 | | -0.0122 | | -0.1190 | [*] |
| P.HEMPLE | | -0.2428 | | -0.1257 | | 0.1104 | | 0.8651 | [**] | -0.5880 | [**] |
| P.CIT.Y | | -1.4246 | | -0.1133 | | -0.5258 | [*] | 1.4528 | [*] | 0.6039 | |
| P.CIT.T | | -2.9168 | | -1.6419 | | 0.2629 | | 2.0848 | | 2.2062 | [**] |
| HOMEOWN | | 0.2338 | | 0.4203 | [****] | -0.0859 | [**] | -0.6049 | [****] | 0.0379 | |
| HOMESIZE | | 0.0018 | | -0.0001 | | 0.0006 | | -0.0012 | | -0.0012 | |
| HOME2OWN | | -0.1703 | | 0.1063 | | -0.0778 | | 0.1663 | | -0.0244 | |
| CAROWN | | 0.0554 | | 0.1654 | [**] | 0.0256 | | 0.0921 | | -0.3366 | [****] |
| CAR2OWN | | 0.2399 | [*] | -0.0110 | | -0.0092 | | -0.0809 | | -0.1392 | [**] |
| DISAPERS | | -0.1678 | | -0.1642 | [***] | -0.0514 | [**] | -0.0816 | | 0.4640 | [****] |
| PHHELP.H | | 0.5102 | [*] | -0.2815 | | 0.0382 | | -0.2202 | | -0.0302 | |
| UHHELP.H | | 0.0670 | | 0.1753 | | 0.0331 | | -0.1258 | | -0.1635 | |
| CITY | | 0.0435 | | 0.0695 | | 0.0780 | | 0.0006 | | -0.1976 | [**] |
| LANDSIDE | | -0.4061 | [**] | 0.1152 | | -0.0970 | [*] | 0.2715 | [*] | 0.1257 | |
| WESTERN | | 0.2421 | [*] | -0.0442 | | -0.0849 | [***] | -0.0173 | | -0.0972 | |
| CIT.Y | | 2.2141 | [*] | -0.1552 | | 0.4874 | | -1.8078 | [**] | -0.7296 | |
| CIT.T | | 1.7933 | | 1.0488 | | -0.1991 | | -1.5340 | | -1.1048 | |
| C2.D | | -0.0118 | | 0.0019 | | 0.4361 | [****] | -0.3922 | [***] | -0.0340 | |
| C2_3.D | | 0.0270 | | -0.2028 | | 0.3028 | [****] | -0.0670 | | -0.0547 | |
| C4_6.D | | 0.5151 | [***] | -0.1532 | | 0.1874 | [****] | -0.3978 | [***] | -0.1556 | [*] |
| C7_10.D | | 0.2537 | [*] | -0.0735 | | 0.0885 | [**] | -0.1357 | | -0.1346 | [*] |
| C11_15.D | | 0.3690 | [***] | -0.1553 | [*] | -0.0550 | | -0.1743 | [*] | 0.0194 | |
| C16_20.D | | 0.7374 | [****] | -0.2995 | [****] | -0.0108 | | -0.4169 | [****] | -0.0138 | |
| C21_27.D | | 0.7517 | [****] | -0.1381 | | -0.0934 | [**] | -0.5143 | [****] | -0.0078 | |
| ICC.FT | | 0.2407 | | 0.0369 | | 0.2366 | [**] | -0.5131 | | 0.0050 | |
| ICC.PT | | -0.2529 | | -0.1083 | | 0.0375 | | 0.3594 | [*] | -0.0430 | |
| working.age | | 0.9404 | [****] | -0.1070 | | -0.1011 | | -0.4265 | [**] | -0.3014 | [**] |
| HWAGE2 | | -0.0017 | | 0.0001 | | -0.0002 | | 0.0015 | | 0.0001 | |
| R ² | SE | 0.4290 | 3.78 | 0.0740 | 2.24 | 0.0720 | 0.96 | 0.3090 | 2.77 | 0.2580 | 1.91 |
| adj. R ² | N | 0.4240 | 5522 | 0.0680 | 5522 | 0.0660 | 5522 | 0.3040 | 5522 | 0.2520 | 5522 |
| F-test | df | 103.5 | 41 | 11.1 | 41 | 10.8 | 41 | 61.7 | 41 | 47.9 | 41 |

³⁰ Signif. codes: 0 '[****]' 0.001 '[***]' 0.01 '[**]' 0.05 '[*]' 0.1 '.' 1

5.3.1. Market work

As to be expected, the intercept of market work lies with about 8 hours for men strictly above the women's value (5:30 hours). As the rate of non-participants (64.4% females: 40.5% males) on the particular day surveyed and the general probability of part-time work is much higher for females, females' market work intensity is significantly lower (2.3 : 5.18 hours per day³¹). Furthermore the market labour distribution for participants is considerably flatter in case of females³². Therefore the influence of all (common) covariates is expected to differ significantly. While the seemingly weaker influence of WEEKEND mainly reflects the fact of the lower starting value (constant) and – just on second hand – the higher proportion of Saturday workers among females, the interrelation of starting value and age gives an interesting insight: *ceteris paribus*, men's market labour intensity declines in an accelerating manner with the age³³, while females' intensity stays quite constant. Mainly due to the dominating gender specific segregation of productive tasks, the men's market labour intensity does not significantly depend on their education level – they are used to work fulltime anyway. Women's market labour intensity in contrast shows an interesting pattern: Compared to females just having absolved compulsory level, a more specialized education exhibits a significantly higher influence on market labour intensity. The influence of having absolved college/university, vocational school or an apprenticeship (or – not explicitly in the estimator - technical/commercial high school) lies highly above the parameter of compulsory or general high school level (*sic!*). So for women's factual labour market participation the specialisation seems to be more relevant. The formal education level evidently bears less influence.

Being self employed or an employee in a high position raises the market labour intensity significantly for both sexes. The quite common thesis that women being in top positions have to work harder can be confirmed: women in high positions work - *ceteris paribus* - about 20 minutes longer per day, compared to men in comparable professional status.

The influence of the respective partner's professional status on the agent's own market labour intensity shows an interesting relationship: First, given the partner works in a self-employed relation, the agent works significantly more on the market for his/herself. This is partly due to assortative mating and/or the fact that a high fraction of self-employed have raised their business with their spouse, so both are self-employed and therefore exhibit long

³¹ Further statistics in A.2.2 Market Work; see Appendix - Table 12 & Appendix - Table 13

³² see Appendix - Figure 3

³³ see Appendix - Figure 2; to control for some non-linearity, AGESQ (age²) is introduced as an additional covariate

market working hours. On the other hand the hourly effect on males' market labour intensity is more than 2.5 times higher. So, in addition to the assortative mating effect, the fact that the female partner is self employed seemingly animates men to work harder.

Although the effect of being in a medium professional position on any activity intensity does not significantly differ from the effect of being an employee in a low professional position³⁴, the respective partner's effect on the agent's activity intensities does show remarkable differences – at least in case of females: Having a partner that works in a medium or high professional position reduces the market work intensity by approximately half an hour.

As the majority of households' endowment does contain a car, this item does not show too much influence on either activity, but the existence of a second car does. Note that this item does not only describe the household's property status, it is also related to the regional characteristics and average distances that have to be commuted. The strict positive relationship to females' market labour intensity can also have the inverse relation: As the woman has a rather far distanced job, the respective household is more likely to have a second car. Anyway, females in households having a second car are likely to shift 0.85 hours per day towards market labour related activities – including commuting to/from work.

Paid and unpaid help for care and household duties show the expected positive impact on market work intensity. The opportunity costs for organizing assistance are below the costs for working in the market. The significance as well as the value relation of paid and unpaid assistance per sex arouses the suspicion that men primarily substitute via paid assistance, while women rather motivate their social network for assistance.

Interestingly, living on the landside induces a negative impact on the extent of market labour related activities. As the estimator controls for means of transportation (owning a car), the "pure" region type effect is elaborated.

Gendered division of labour induces the impact of having children: While males' market labour intensity is – at least within significant regions – strictly positive, the inverse relationship is shown for females.

Having controlled for all covariates described above, still a differential of one hour per day can be seen by controlling for the working age limits³⁵.

³⁴ which is the reference category; therefore MEMPLS was excluded from the linear estimator

³⁵ females up to 60, males up to 65

5.3.2. Home Production

In case of home production we face two different kinds of distribution³⁶. While females exhibit a nearly non-truncated, more or less symmetric distribution of home production activities, males first show a fraction of about one third of non-participants. Further, the intensity of male participants is continuously falling, while women show a modal value around 5 hours home production per day. Due to symmetry, women's average and the median values are in this range. Therefore the constants of the estimators differ significantly: Females "start" with 1.7 hours daily and increase their home production intensity about 8 minutes per year in age. Males, in contrast, exhibit a comparable increase on a constantly lower level. On average, the estimated gender difference in home production intensity is about 3.5 hours per day. This difference peaks for age cohorts 50-59 and flattens again for elder persons. This is driven by two main facts: First, entering retirement often opens the opportunity to participate more in day-by-day home production as well in activities, that have not been executed that intensively before (e.g. gardening, construction works). Second, one or two decades after retiring, a large fraction of men have to overtake household tasks their wives had done before, but can not continue to do for physical reasons.

Females' household production intensity declines significantly with their education level. In case of males no significant influence is observable. Being self employed causes a similar reaction to nearly the same extent: both sexes show about half an hour less home production when self-employed. Being employed and in a comparably high professional position causes a reduction of – ceteris paribus - even three quarters of an hour for females. No significant response is seen in case of men.

The partner's employment status shows quite different behaviours: While males with self-employed female partners reduce their daily home production intensity by about a quarter of an hour, the comparable reaction of females on men's self-employment is not significant, although negative too. The professional status of employed partners has – as in all productive categories – no significant impact on males' behaviour, while females seem to intensify their home production up to half an hour.

Owning the dwelling raises home production significantly for both sexes, while other household endowments like ownership of a first and second car exhibits different reactions: While ownership of a first car (dominantly used by the males) raises home production

³⁶ see Appendix - Figure 7 in A 2.3 Home Production

significantly for men, the ownership of a second car (mostly driven by females) seems to reduce home production intensity of women.

Having a helping hand for care and household tasks clearly reduced the females' time spent to home production, while males' engagement seems to stay unaffected. Having controlled for differences in market density for paid home production assistance (mostly in cities) and social networks for unpaid (mostly on the landside) the essential regional difference in home production intensity is worked out: *ceteris paribus*, women in large cities tend to spend one hour per day less in home production. Males do not show significant differences.

The home production intensity by children shows an interesting effect in case of females. Having babies the home production intensity starts quite high and falls until school age. From age 7 on home production intensity rises again and tends to have a peak, after children that still live at home have become adults. Compared to teenagers and young adults small children seem to evoke less housekeeping work. Males react differently: having teenagers or young adults at home, men seem to intensify market work and decrease home production participation³⁷.

5.3.3. Child and Elder Care

The last category of productive activities is care. Regarding the intercept and age dependency exclusively, it becomes evident that females start with a nearly three times higher intensity at age 20 (1.4 : 0.5 hours per day), but nearly enter men's level at age 60³⁸. Educational differences account to some age-independent specific differences: Especially high educated women tend to engage about 25 minutes per day more in care duties.

The most essential positive influence on care intensity is expected by the existence of disabled persons or small children within the household. Therefore women with a disabled person within the household tend to increase care intensity about 10 minutes. In case of men the adverse effect seems to prevail: Men reduce care and all other productive activities by a couple of minutes and – that is statistically significant – increase own recreation time in return. The existence of children up to age 10 raises care intensity of both genders, but females' intensity lies constantly above males'. Usage of fulltime day-care centres raises (!)

³⁷ Some caution has to be claimed for: the childrens generation effect can also be a hidden own generational effect that is not entirely controlled by the respective covariates (AGE, AGESQ, working.age).

³⁸ see Appendix - Figure 2 again

men's care participation about 14 minutes per day³⁹, while part-time institutional day-care mainly affects females' time schedule (plus 12 minutes).

5.3.4. Active Leisure

As females are more engaged in productive tasks, consumptive tasks have to be enjoyed more by males. Comparing Appendix - Figure 2 and figures and descriptives in A 2.5 Active Leisure it becomes clear that this can be verified for all ages. In case of active leisure a strong age dependency becomes evident, primarily driven by transformation from working age to retirement phase. Controlling for all covariates within the SUR-system, the age effect shows a higher impact for males, so the distance in active leisure even widens with the age.

Compared to males just having absolved compulsory education, higher educated males seem to enjoy more active leisure. This relation can be just partly followed for females. Items on professional status show the expected reversed effects compared to productive activities. Home ownership reduces leisure in favour of home production and – in case of males, but rather insignificantly – market labour.

The presence of children reduces active leisure throughout. While males substitute the time spent for child (and elder) care primarily by a reduction of active leisure, females tend to substitute this – much higher amount of time needed – primarily by leaving labour force temporarily or reducing formal working hours. Therefore nearly no significant impact of young children on females' leisure is observable. With teenager or young adults within the household, this relation does not continue to hold. The effect of these children on the leisure amount of females is more comparable to men's, as much more females are in workforce again and do/can not substitute in-between productive activities.

Full time arrangements in institutional child care go along with a substantial and significant reduction in females' active leisure. This has to be seen as the shadow effect of the higher market labour share. The comparable effect for males is less significant. It compensates for higher market labour engagement as well higher child care intensity – the increased commuting time to and from child care facilities.

³⁹ mainly additional commuting time to/from the daycare centre

5.3.5. Recreation and Personal Care

Finally, recreation and personal care – an activity category that is mainly independent on all market transactions – astonishes by the fact that – looking on the regression – males seem to exhibit higher values throughout all age classes⁴⁰. This is quite unusual, as – observing the whole population instead of partnered persons – females tend to exhibit higher values for recreation. This is mainly an age-specific and structural effect. The life expectancy of women lies considerably above men's. These are the years a considerably higher share of the day has to be invested for recreation. Furthermore, we see a higher amount of recreation time for partnered men compared to males without a partner - partnered males seem to rest more. The age specific convex shape of recreation time within the regression is also clearly observable within the descriptives⁴¹.

In case of men the significantly higher shares of active leisure by education level are primarily "paid" by reduced recreation time. The more specialized the education, the higher this effect.

More astonishing is the effect one or two cars within household's endowment have on recreation intensity. Males as females show more or less significant negative relationships⁴².

The presence of children within the household shows an unexpected weak effect. But, as – having a small child - important REM-sleep-phases cannot be reached too often or too long, this is compensated by additional napping time. Although these parents are much more exhausted, no significant negative effect on recreation time is observable. Just primary school agers seem to have a more significant negative impact: Having controlled for all the other covariates, primary school aged children need about 10 minutes of their parents' daily recreation time.

⁴⁰ see Appendix - Figure 2

⁴¹ see Appendix - Figure 21

⁴² As the higher commuting time of car owners is assigned to the activities the particular way is taken for, all productive activities and active leisure include some imputed commuting time. As nearly nobody falls to bed immediately after having traveled, nearly no commuting time has been assigned to recreation and personal care. For these reasons higher (car based) commuting time is paid by 20-30 minutes less recreation time per partnered males' day or by up to 15 minutes females' day share.

5.4. Correlation of Residuals

Finally, the correlation of residuals is of interest. All correlation coefficients are expected to be negative, as an overestimate in one category has to be compensated by underestimates within at least one of the four others. Furthermore, it has to be expected that closely related categories (HP & CC; AL & RC) show weakest correlation. Otherwise a systematic bias would have occurred within the estimation procedure. So the remaining question is, how significant the correlation between market work (MW), non-paid productive work (HP & CC) and consumption activities (AL & RC) is.

Table 6: Correlation of Residuals of SUR-Estimator

| FEMALES | MW | HP | CC | AL | RC | MALES | MW | HP | CC | AL | RC |
|---------|-------|--------|--------|--------|--------|-------|-------|--------|--------|--------|--------|
| MW | 1.000 | -0.524 | -0.245 | -0.442 | -0.272 | MW | 1.000 | -0.473 | -0.185 | -0.616 | -0.434 |
| HP | | 1.000 | -0.009 | -0.263 | -0.168 | HP | | 1.000 | 0.005 | -0.130 | -0.050 |
| CC | | | 1.000 | -0.137 | -0.106 | CC | | | 1.000 | -0.076 | -0.033 |
| AL | | | | 1.000 | -0.083 | AL | | | | 1.000 | -0.044 |
| RC | | | | | 1.000 | RC | | | | | 1.000 |

Compared to market work, the contrasting categories show an extensive negative correlation. Regarding the correlation to consumption categories the residuals' correlation is weaker in case of females. Hence, in case of females, non-market productive activity categories compensate for biased estimates in market labour, while primarily corrections in consumption activities compensate deviations of males' observed market work from its estimates. This result was expected, as the standard deviation for males' market work intensity (5.01) lies clearly above women's value (3.64)⁴³. The error will be rather compensated by a category that also exhibits comparably wide variations. Active leisure (males: 3.34; females: 2.68)⁴⁴ offers this opportunity predominantly for men.

Comparing non-market productive activities to consumptives, especially active leisure, the reversed effect can be expected: The correlation of error terms is higher for females.

⁴³ see Appendix - Table 12f

⁴⁴ see Appendix - Table 24f

6. Discussion

Regarding the dependencies of some activity categories on selected covariates, few new qualitative insights seem to have been elaborated, but the scope of this paper goes far beyond: with this SUR-estimator the – simultaneously occurring – marginal effects of any variations in identified covariates on all activity categories can be estimated. Within this system endogeneity-problems are quite limited.

Extending the analysis, so that partners' activity intensities are taken as additional covariates, will increase feedback-loops that have to be controlled for. Finally, turning the SUR-estimator to a simultaneous equation system, all other activities would have to be embedded in each regression equation analysed. Therefore a 2SLS-system⁴⁵ would have to be developed, that imputes the values of one activity to the estimator of the other. But this seems to be the point, where the main difference of time-use analysis to other simultaneous-equation-systems arises: as we are bound to some strict properties of a comprehensive time-use estimator – denoted in Equation (5) – we would implement 2SLS estimators that were quite similar to each base equation. For that reason no additional insight should be expected. On the other hand, a 2SLS-estimator that induces partners' and own additional activity intensities sharpens the eye for the activities' interdependencies.

An ever rising discussion point on truncated items like time use per day is how to control for truncation. The estimators proposed in the literature are either variants of the TOBIT procedure, or – as fixed time slots are surveyed – count data regression procedures like POISSON or NEGATIVE BINOMIAL approaches. But considering again Equation (5) and checking these two conditions, it can be seen that substantially small deviations from these conditions occur within the OLS-based SUR-system. The estimates sum up to exactly 24 hours with nearly no variation and the coefficients of real covariates sum up to zero. Furthermore, the most essential condition for the TOBIT-estimator is not given. The residuals are not normally distributed but systematically skewed.

For all these reasons the analysis seems to have reached an important milestone here. Structural effects on the distribution of time allocations and main differences by gender are depicted in the SUR-system. Interaction effects with the partner's time allocation can be added in future work.

⁴⁵ 2SLS: two steps least squares

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APPENDIX

A.1 Comparable Works

Appendix - Table 1: Wage and income effects on work and sleep

| Dependent Variable: | Wage | Income | R ² | ρ |
|-----------------------|---------------------|------------------|----------------|-------|
| | All Respondents | | | |
| Sleep and naps | -141.44 (77.35) | -1.78 (4.80) | 0.024 | -0.24 |
| Waking nonmarket time | 132.18 (129.37) | -1.71 (8.09) | 0.162 | |
| | Men | | | |
| Sleep and naps | -181.68 (120.88) | -2.88 (5.77) | 0.04 | -0.23 |
| Waking nonmarket time | 233.34 (193.67) | -6.69 (9.30) | 0.05 | |
| | Women | | | |
| Sleep and naps | 64.30 (93.44) | 1.55 (8.43) | 0.018 | -0.27 |
| Waking nonmarket time | -262.42 (166.99) | 14.44 (14.80) | 0.053 | |

Source: Biddle/Hamermesh (1990); p 938 ⁴⁶

⁴⁶ Murphy-Topel corrected standard errors in brackets; “ρ” shows Pearsons’ correlation coefficient of the error terms of respective equations. The estimators also control for the sex, marital status, health status, race, region and the inverse Mills ratio from Heckman’s procedure

Appendix - Table 2: Substitutionability of paid and unpaid work

| | Paid Work | | Unpaid Work | |
|---------------------------------|------------|------------|-------------|-----------|
| | Women | Men | Women | Men |
| Intercept | -21.242 | 37.281 *** | 14.763 | 12.388 |
| Female Paid Work | - | 0.333 ** | -0.222 | 0.095 |
| Male Paid Work | 0.802 *** | - | 0.341 *** | -0.269 ** |
| Female Unpaid Work | -1.154 *** | 0.316 | - | 0.295 |
| Male Unpaid Work | 1.019 *** | -0.612 ** | 0.184 | - |
| Age | -0.058 | 0.020 | 0.112 * | -0.022 |
| Education: | | | | |
| High School | 1.536 | -3.430 | -2.967 | 0.826 |
| Vocational Education | -0.193 | -0.015 | -1.935 | 1.142 |
| Short Post-Secondary | -1.430 | -0.873 | -2.702 | 0.342 |
| Medium Post-Secondary | -0.775 | -2.420 | -1.570 | 2.857 * |
| Long Post-Secondary | -0.259 | -0.183 | -1.443 | 5.354 *** |
| Disposable Income | 2.834 * | -0.707 * | -0.653 | 0.054 |
| Job Characteristics: | | | | |
| 1-20 Subordinates | 1.982 | 0.850 | | |
| 21-50 Subordinates | 9.264 | 7.451 ** | | |
| 51 + Subordinates | 4.484 | 0.728 | | |
| Flexible Working Hours | 2.603 * | 3.601 ** | | |
| More than 1 Hour Commuting Time | 3.125 * | -0.994 | | |
| Couple-Specific: | | | | |
| Living in Copenhagen | -2.765 | 2.636 * | -1.824 | -0.353 |
| Living in Rural Area | -1.485 | 3.792 ** | -1.270 | -1.317 |
| Education Gap | 0.027 | 0.554 | -0.658 | -1.276 ** |
| Living in Single-Family House | | | 1.822 | 2.376 * |
| Having Another Residence | | | 3.165 | 4.389 * |
| Number of Rooms | | | 0.240 | 0.185 |
| Remodelling | | | 1.893 | 4.053 *** |
| Number of Children Aged 0-2 | | | 12.995 *** | 3.699 |
| Number of Children Aged 3-6 | | | 6.542 *** | 2.619 |
| Number of Children Aged 7-17 | | | 2.701 *** | 0.881 |

Source: Deding/Lausten (2006) p.40f;

Data source: Danish time use survey 2001

*** Statistically significant at the 0.01 level; ** at 0.05; * at 0.10; n=718; Estimated by AGLS

Shaded areas mark endogenous covariates in respective equations

Appendix - Table 3: Substitutionability of paid work, housework and childcare

| | Paid Work | | Housework | | Childcare | |
|---------------------------------|-----------|-----------|-----------|-----------|------------|-----------|
| | Women | Men | Women | Men | Women | Men |
| Intercept | -24.061 | 30.522 ** | 10.468 * | 11.337 | -24.120 | 9.229 |
| Female Paid Work | - | 0.402 ** | -0.162 | 0.094 | 0.017 | 0.050 |
| Male Paid Work | 0.674 *** | - | 0.359 *** | -0.232 * | 0.249 | 0.062 |
| Female Housework | -0.922 ** | 0.737 | - | 0.251 | -0.227 | -0.154 |
| Male Housework | 0.942 *** | -0.848 ** | 0.233 | - | 0.343 | 0.027 |
| Female Childcare | -1.038 ** | 0.051 | -0.009 | 0.204 | - | -0.178 |
| Male Childcare | 0.703 | -0.146 | 0.142 | -0.257 | 0.284 | - |
| Age | -0.094 | -0.070 | 0.151 ** | -0.015 | -0.032 | 0.048 |
| Education: | | | | | | |
| High School | 3.084 | -2.903 | -2.433 | 0.142 | -6.148 ** | 0.191 |
| Vocational Education | 0.742 | 0.873 | -2.086 | 0.879 | -0.794 | 1.097 |
| Short Post-Secondary | 0.013 | -0.092 | -3.276 | -0.166 | -2.264 | 2.173 |
| Medium Post-Secondary | 0.175 | 0.139 | -1.786 | 2.297 | -0.189 | 2.026 |
| Long Post-Secondary | 1.207 | 1.404 | -2.921 | 3.963 ** | -1.415 | 4.748 ** |
| Disposable Income | 3.272 ** | -0.504 | -0.728 | 0.101 | 0.547 | -0.015 |
| Job Characteristics: | | | | | | |
| 1-20 Subordinates | 2.123 | 0.578 | | | | |
| 21-50 Subordinates | 9.448 | 6.696 | | | | |
| 51 + Subordinates | 5.461 | 0.131 | | | | |
| Flexible Working Hours | 2.343 | 2.920 * | | | | |
| More than 1 Hour Commuting Time | 2.861 | -1.299 | | | | |
| Couple-Specific: | | | | | | |
| Living in Copenhagen | -2.119 | 2.985 * | -1.891 * | -0.521 | -0.166 | 0.189 |
| Living in Rural Area | -1.359 | 3.809 ** | -1.081 | -0.711 | -0.040 | -2.425 ** |
| Education Gap | 0.293 | -0.218 | -0.458 | -1.118 * | -0.619 | -0.836 |
| Living in Single-Family House | | | 1.882 | 2.764 ** | | |
| Having Another Residence | | | 3.674 | 4.316 * | | |
| Number of Rooms | | | 0.133 | 0.043 | | |
| Remodelling | | | 1.433 | 4.467 *** | | |
| Number of Children Aged 0-2 | | | | | 18.622 *** | 14.417 ** |
| Number of Children Aged 3-6 | | | | | 9.753 *** | 9.936 *** |
| Number of Children Aged 7-17 | | | | | 5.708 *** | 5.292 *** |

Source: Deding/Lausten (2006) p.44f; Data source: Danish time use survey 2001

*** Statistically significant at the 0.01 level; ** at 0.05; * at 0.10; n=718; Estimated by AGLS

Shaded areas mark endogenous covariates in respective equations

Appendix - Table 4: 2SLS estimates for child care intensity: Austria and Sweden

| AUSTRIA; TUS 1992 | | | | SWEDEN; HUS1984 & 1993 pooled | | | |
|---------------------------|------------------|-----|----------------------|-------------------------------|-------------------|-----|-----------------------|
| | Males | | Females | | Males | | Females |
| ccare (f) | 0,18 (0,054) | *** | | ccare (f) | 0.951 (0.086) | *** | |
| ccare (m) | | | 0,18 (0,136) | ccare (m) | | | 0.989 (0.091) *** |
| | | | | wage (m) | -0.003 (0.011) | | |
| | | | | wage (f) | | | -0.004 (0.008) |
| labor (m) | -0,11 (0,013) | *** | 0,24 (0,019) *** | labor (m) | -0.295 (0.107) | *** | 0.287 (0.108) *** |
| labor (f) | 0,13 (0,024) | *** | -0,33 (0,036) *** | labor (f) | 0.119 (0.150) | | -0.137 (0.146) |
| | | | | iccare | -0.422 (0.705) | | 0.473 (0.711) |
| educ (m) | 5,31 (0,967) | *** | | educ (m) | 0.013 (0.025) | | |
| educ (f) | | | 10,68 (1,525) *** | educ (f) | | | -0.001 (0.026) |
| | | | | NLINC/10 ⁶ | | | |
| youngest child 0-3 | 36,45 (6,995) | *** | 92,25 (9,294) *** | youngest child 0-2 | -1.375 (0.574) | ** | 1.464 (0.559) *** |
| youngest child 4-6 | 25,43 (4,431) | *** | 33,52 (7,758) *** | youngest child 3-6 | -0.830 (0.388) | ** | 0.923 (0.366) ** |
| | | | | youngest child 7-12 | | | |
| two children or more | 2,28 (2,920) | | -0,28 (4,847) | two children or more | | | |
| | | | | Adults | | | |
| home size, m ² | 0,05 (0,029) | * | -0,11 (0,048) ** | home size, m ² | | | |
| | | | | λ (male) | 4.102 (1.550) | *** | -4.177 (1.470) *** |
| | | | | λ (female) | 0.096 (0.795) | | -0.048 (0.808) |
| | | | | Dummy for 1993 | 0.052 (0.320) | | 0.029 (0.279) |
| | | | | Constant | 0.061 (0.850) | | 0.479 (0.828) |
| Observations | 1849 | | | Observations | 756 | | |
| R ² | 0,336 | | 0,647 | R ² | 0.21 | | 0.22 |

Standard errors in parentheses. *, **, *** significant at 10%, 5% and 1%.

 λ is the inverse Mill's ratio in the bivariate case.

Sources: Neuwirth (2004) p.28

Hallberg/Klevmarken (2003) p.221; models (7) and (8)

Appendix - Table 5: Marginal Effects of SUR-Estimators by Kimmel/Connelly**Marginal Effects of Determinants of Minutes Spent in Leisure, Child Care, Home Production, and Employment on Weekdays**

| | Leisure | Child care | Home Production | Employment |
|--------------------------------|----------------|-------------------|------------------------|-------------------|
| Constant | 1126.8380*** | -49.6952*** | 191.3162*** | -142.737*** |
| Education | 3.5615 | -1.3499*** | -1.0196 | -6.4186 |
| Age | 0.2006 | -1.003** | 2.4817*** | -1.2418* |
| Husband's earnings if married | 2.8561 | 3.3838** | 7.7990*** | -12.5366*** |
| Married spouse present | -34.6962** | -24.8966** | 27.0028** | 36.74948** |
| Nonwhite | 28.3305** | -13.1213* | -12.9236 | -12.1312 |
| Hispanic | -60.3406*** | 3.8213 | 3.5383 | 47.1855*** |
| Urban | 28.2183 | -15.4076** | -4.2114 | -6.3245 |
| South | -15.872 | 15.3447** | -1.1925 | -2.6125 |
| Num kids aged 0 to 2 | -31.2335* | 70.2370*** | 11.0582 | -38.7074*** |
| Num kids aged 3 to 5 | -22.5108 | 28.3464*** | -11.5492 | -6.0552 |
| Num kids aged 6 to 9 | -31.8655*** | 24.6079*** | 14.8789** | 10.2257 |
| Num kids aged 10 to 12 | -21.5881* | 15.2517*** | 35.6205*** | -28.7272** |
| Num kids aged 13 to 17 | -2.1481 | -1.3806 | 5.4408 | -5.8453 |
| Presence of other adult in hh | 28.6174* | -30.5086*** | 12.0608 | -33.1538** |
| Summer | 43.0892*** | -27.0622*** | -2.023 | 1.9105 |
| Predicted Hourly Wage | -141.8880*** | 145.7373*** | -70.5748*** | 198.7000*** |
| Predicted Pcc for Child 0 to 5 | 0.9444 | 7.1358*** | 6.3475** | -12.4935*** |

Marginal Effects of Determinants of Minutes Spent in Leisure, Child Care, Home Production, and Employment on Weekends

| | Leisure | Child care | Home Production | Employment |
|---------------------------------|----------------|-------------------|------------------------|-------------------|
| Constant | 1255.484*** | -82.7842*** | 89.5599*** | -69.1377*** |
| Education | 19.2635*** | -8.9494** | -11.2658** | -2.961 |
| Age | 0.7293 | -0.1613 | 1.0995** | -0.8513*** |
| Husband's earnings if married | 0.1866 | 1.9442* | 2.4821 | -4.3951*** |
| Married spouse present | -9.5219 | 1.5065 | 19.4376 | -5.0764 |
| Nonwhite | 13.2013 | -1.324 | -1.8582 | -8.1818* |
| Hispanic | 1.5951 | 2.5993 | 11.356 | 0.2289 |
| Urban | 33.0258** | -4.9695 | -19.3522* | -7.871 |
| South | 5.6541 | 0.0626 | 0.0223 | 1.3845 |
| Num kids aged 0 to 2 | -47.9985*** | 58.8274*** | -18.6932 | -7.881 |
| Num kids aged 3 to 5 | -4.0174 | 3.3756 | -12.463 | -6.1251 |
| Num kids aged 6 to 9 | -16.1478* | 12.9219*** | 11.7730* | -6.1082** |
| Num kids aged 10 to 12 | -19.1951* | -15.9812*** | 19.2328** | 3.9711 |
| Num kids aged 13 to 17 | 2.0416 | -21.0270*** | -12.0912 | 9.2404** |
| Presence of other adult in hh | -13.4803 | -19.8374*** | -11.4879 | 21.6870*** |
| Summer | 23.9861* | 1.966 | -8.9959 | -12.3242*** |
| Predicted Hourly Wage | -217.2136*** | 114.2975*** | 106.7825*** | 43.1309** |
| Predicted Pcc for Child 0 to 5 | -4.6809 | 0.8382 | 3.9213 | 4.2427*** |
| Predicted Pcc for Child 6 to 12 | 4.6789 | -5.8413*** | 0.6182 | 2.0074 |

Significance: **=10%; ***=5%; ****=1%.

Source: Kimmel/Connelly (2006) p.38f; Data source: ATUS 2003

Appendix - Table 6: Cross-equation correlation of the Kimmel/Connelly estimators**Cross-equation correlations**

| | | Weekdays | | Weekends | |
|----------------------------------|---|-----------------|---|-----------------|--|
| Rho: leisure/childcare | - | 0.227 (***) | - | 0.298 (***) | |
| Rho: leisure/ working | - | 0.565 (***) | - | 0.554 (***) | |
| Rho: child care/ working | - | 0.280 (***) | - | 0.026 | |
| Rho: leisure/ home production | - | 0.090 (***) | - | 0.506 (***) | |
| Rho: child care/ home production | | 0.045 (*) | - | 0.137 (***) | |
| Rho: working/ home production | - | 0.548 (***) | - | 0.148 (***) | |

Source: Kimmel/Connelly (2006) p.38f; Data source: ATUS 2003

Appendix - Table 7: Estimated price-elasticities of the four activities analysed

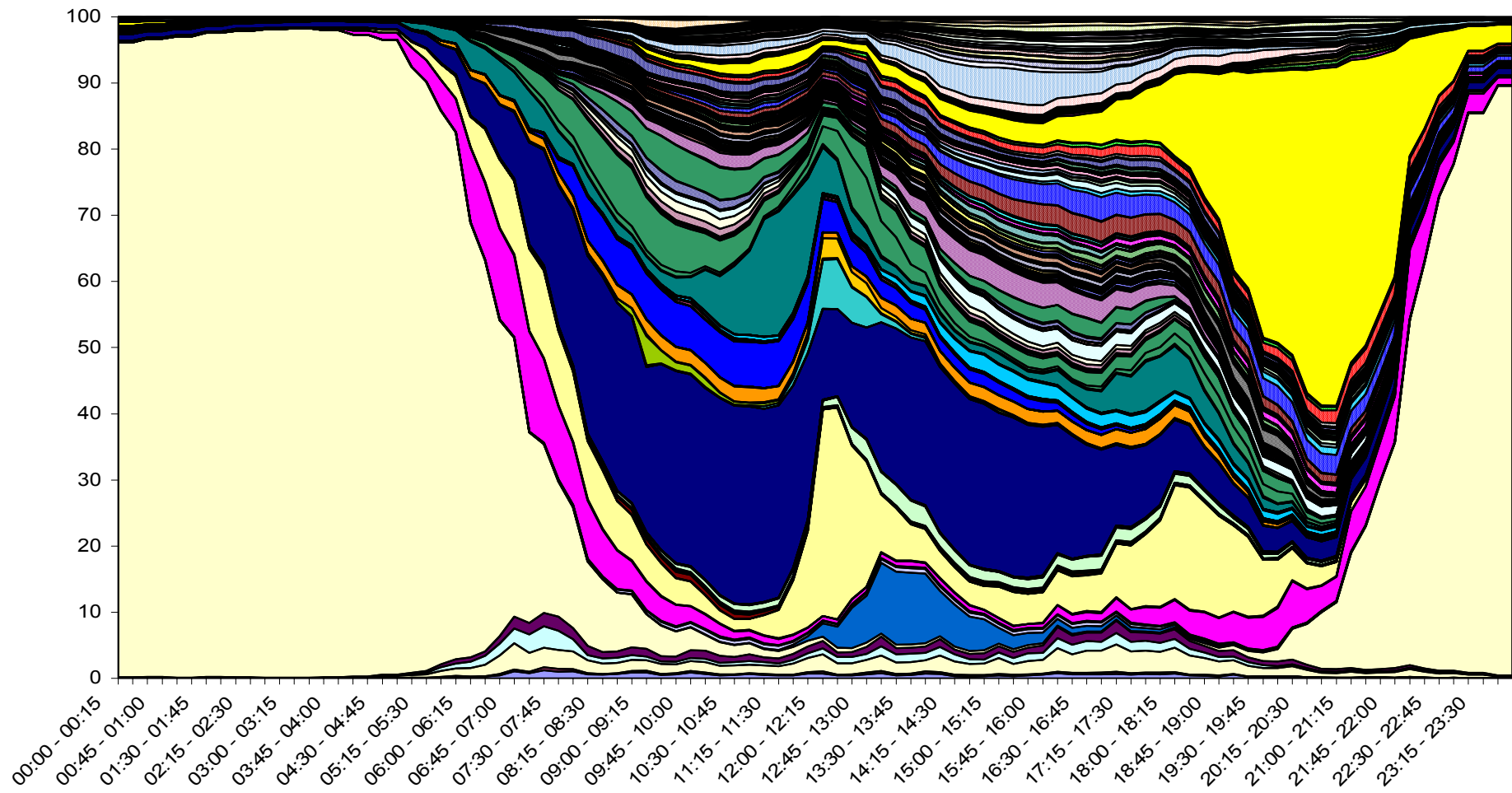
| | | Leisure | Child Care | Home production | Employment |
|-----------------|---------------------------------|----------------|-------------------|------------------------|-------------------|
| Week-day | Predicted Hourly Wage | -0.1685*** | 1.2040*** | -0.3656*** | 0.8181*** |
| | Predicted Pcc for Child 0 to 5 | 0.0027 | 0.1420*** | 0.0792** | -0.1239*** |
| | Predicted Pcc for Child 6 to 12 | 0.0103 | -0.0263 | -0.0006 | -0.0620* |
| Week-end | Predicted Hourly Wage | -0.2120*** | 1.3939*** | 0.4211*** | 0.7358** |
| | Predicted Pcc for Child 0 to 5 | -0.0114 | 0.0254 | 0.0385 | 0.1802*** |
| | Predicted Pcc for Child 6 to 12 | 0.0084 | -0.1313*** | 0.0045 | 0.0631 |

Significance: **=10%; ***=5%; ****=1% of the underlying coefficients.

Source: Kimmel/Connelly (2006) p.40; Data source: ATUS 2003

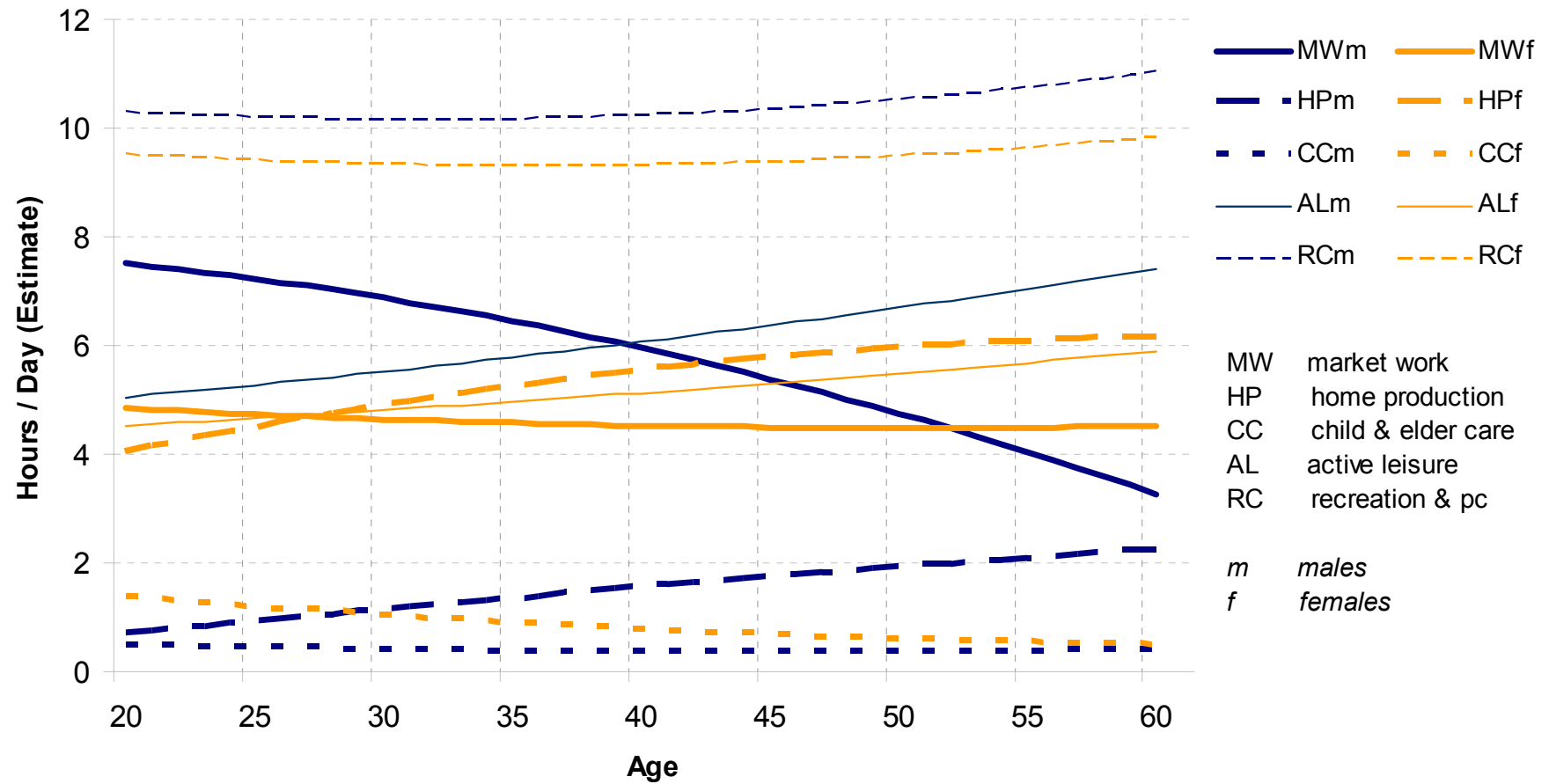
A.2 Additional Estimators and Descriptive Statistics

Appendix - Figure 1: Tempogram on all activities observed



| | | | |
|--------------------------------------------------|-----------------------------------------------------|------------------------------------------------|-----------------------------------------------|
| 100 Way, by foot | 101 Way, by bicycle | 102 Way, by car | 103 Way, by public transport |
| 104 Way, no spec. | 111 Sleep | 112 Sleep at noon | 113 In bed because of illness |
| 114 to nothing because of illness | 121 Physical care | 122 Wash hair | 131 Eating |
| 141 Medical care | 151 Visiting the doctor | 152 Visiting the Hairdresser | 153 Visiting the cosmetician |
| 154 Visiting a sauna, solarium | 156 Official Way (personal matters) | 161 Relaxing | 162 Waiting |
| 171 Filling in the diary | 172 Bundeling the schoolbag | 173 Other personal duties | 211 Main job (work) |
| 212 Working overtime | 213 Having a meal during work | 214 Coffe-break during work | 215 Other kind of midday break |
| 231 Second job | 241 Searching for a job | 251 Giving a presentation (within job) | 252 Scientific activities (within job) |
| 253 Other duties relating to work | 261 Attending school | 262 Attending day care school | 263 Attending evening schools |
| 264 Attending music lesson | 265 Having a break (school) | 271 Attending professional training course | 272 Attending hobby course |
| 274 Being at the library | 275 Studying textbooks (for job/school) | 276 Attending training course (for job/school) | 278 Doing homework, learning |
| 279 Preparation for courses, learning | 291 Teaching (hobby) | 292 Scientific activities (besides job) | 293 Attending other forms of paid training |
| 311 Cooking | 312 Boiling down, freezing | 314 Setting the table | 315 Doing the dishes |
| 321 Housecleaning | 322 Cleaning the windows | 324 Getting rid of the litter | 325 Cleaning the sidewalk |
| 326 Working in the cellar | 327 Housework, no spec. | 331 Doing the laundry | 332 Ironing |
| 333 Washing the curtains | 335 Repairing clothes | 336 Cleaning clothes | 337 Cleaning shoes |
| 341 Shopping, food | 342 Shopping, durables | 343 Shopping, no spec. | 345 Storing the purchases |
| 351 Gardening | 352 Caring for flowers and botanics | 354 Walking the dog | 355 Caring for pets |
| 361 Being at the laundry | 362 Settlements for the household | 364 Searching for a dwelling | 371 Planning and organizing for the Household |
| 372 Preparations for a journey | 373 Monitoring craftsmen | 374 Fueling, washing the car | 375 Parceling gifts |
| 376 Household duties, no spec. | 411 Doing repairs for the household | 412 Repairing furniture | 413 Renovate the dwelling |
| 414 Repair tools | 415 Replace furniture | 421 Construction works (house, dwelling) | 422 Planning the construction of dwelling |
| 431 Caring for the car | 432 Repairing the car | 433 (Off)Loading the car | 444 Heating |
| 445 Preparing heating material | 450 Craftwork, no spec. | 511 Baby care | 521 Caring for the child(ren) |
| 522 Cooking for the child(ren) | 523 Feeding the child(ren) | 524 Going to bed with the child(ren) | 525 Looking after the child(ren) |
| 531 Learning with the child(ren) | 532 Exercising music with the child(ren) | 534 Talking with the child(ren) | 541 Reading to the (child(ren)) |
| 542 Playing with the child(ren) | 543 Doing handicrafts with the child(ren) | 544 Watching TV with the child(ren) | 551 Doing sports with the child(ren) |
| 552 Walking with the child(ren) | 553 Attending cultural events with the child(ren) | 555 Accompanying the child(ren) afoot | 556 Accompanying the child(ren) by bicycle |
| 557 Accompanying the child(ren) by car | 558 Accompanying the child(ren) by public transport | 559 Accompanying the child(ren), no spec. | 561 Visiting the children's doctor |
| 562 Medical care of child(ren) | 571 Attending parental convention | 572 Duties for the child(ren) | 573 Other child care duties |
| 611 Chatting with family members | 612 Family meeting, party | 613 Family trip | 614 Visiting a location with (core) family |
| 621 Visiting/meeting relatives | 622 Visiting a location with (other) relatives | 625 Visiting/meeting friends | 626 Visiting a location with friends |
| 628 Having a talk/meeting non-family members | 629 Visiting a location with non-family members | 631 Care of persons | 632 Visiting ill people |
| 633 Assistance for others, no spec | 641 Accompanying afoot | 642 Accompanying by bicycle | 643 Accompanying by car |
| 644 Accompanying by public transport | 645 Accompanying, no spec. | 651 Phoning, personal | 652 Phoning, duties |
| 653 Phoning, no spec | 655 Writing/reading letters, private | 656 Writing/reading letters, duties | 657 Writing/reading letters, no spec |
| 661 Visiting a cafe | 662 Eating outside in a restaurant | 663 Visiting a bar, disco | 671 Trips, not with family |
| 672 Other social contacts | 711 Reading the newspaper | 712 Reading magazines | 714 Reading books |
| 715 Reading, no spec | 721 Listening to the radio | 722 Listening to some sound storage medium | 731 Watching TV |
| 732 Watching Video | 741 Solving puzzles | 742 Media use, no spec | 811 Attending theatre/concert/opera |
| 812 Attending exhibitions, museums | 814 Being in the cinema | 815 Attending a show-event | 817 Attending lectures (leisure activity) |
| 821 Operative tasks, for associations, societies | 822 Charitable social activities | 823 Charitable cultural activities | 824 Charitable activities for the environment |
| 825 Charitable clerical activities | 826 Charitable activities, no spec | 827 Society meeting | 831 Fitness training |
| 832 Having a walk | 833 Hiking, climbing | 834 Bicycle tour | 835 Outdoor children games |
| 836 Bathing, swimming | 837 Hunting, fishing | 838 Going on a mushroom/berries foray | 839 Sightseeing, window-shopping |
| 841 Attending sport events | 842 Attending public parties | 843 Dancing | 851 Tailoring |
| 852 Knitting | 853 Handycrafts, no spec | 861 Making music | 862 Painting |
| 863 Artistic crafts | 864 hobbies, no spec | 866 Activities on the computer | 867 Playing computer games |
| 868 Playing games, no computer | 869 Playing children indoor games | 871 Visiting a church, praying | 872 Visiting a graveyard |
| 873 Participating in religious events | 881 Driving around with the car/motorcycle | 882 Attending a dance school | 883 Attending a drivers school |
| 884 Leisure activities, no spec | 900 unknown | | |

Appendix - Figure 2: Estimates of Activity Intensities Regarding Age (and Controlling for All Covariates in SUR)



A 2.1 Wage Estimator

Appendix - Table 8: Wage Equation; FEMALES

| | Estimate | Std. Error | t value | Pr(> t) | |
|---------------------------------------------------------------|------------|------------|-----------|----------|-----|
| (Intercept) | -24.544963 | 23.491332 | -1.044852 | 0.296399 | |
| ED.APP | 8.812104 | 3.250676 | 2.710853 | 0.006851 | ** |
| ED.VOC | 23.291608 | 3.787876 | 6.148989 | 0 | *** |
| ED.AHS | 37.430669 | 6.109963 | 6.126170 | 0 | *** |
| ED.BHS | 44.540508 | 6.256326 | 7.119276 | 0 | *** |
| ED.UNI | 35.482784 | 5.461278 | 6.497158 | 0 | *** |
| AGE | 4.339063 | 1.143352 | 3.795036 | 0.000158 | *** |
| I (AGE^2) | -0.049345 | 0.015048 | -3.279106 | 0.001085 | ** |
| WESTERN | 9.262515 | 2.629716 | 3.522249 | 0.000452 | *** |
| invMillsRatio | -0.082364 | 5.778378 | -0.014254 | 0.988631 | |
| --- | | | | | |
| Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1 | | | | | |
| Multiple R-Squared: 0.176768 Adjusted R-Squared: 0.167744 | | | | | |

Appendix - Table 9: Wage Equation; MALES

| | Estimate | Std. Error | t value | Pr(> t) | |
|---------------------------------------------------------------|------------|------------|-----------|----------|-----|
| (Intercept) | -40.308483 | 30.360154 | -1.327677 | 0.184482 | |
| ED.APP | 11.88625 | 2.569147 | 4.626535 | 4e-06 | *** |
| ED.VOC | 28.135609 | 4.234822 | 6.643871 | 0 | *** |
| ED.AHS | 54.38574 | 5.561098 | 9.779677 | 0 | *** |
| ED.BHS | 50.012847 | 4.484643 | 11.152025 | 0 | *** |
| ED.UNI | 64.392951 | 4.753636 | 13.546043 | 0 | *** |
| AGE | 6.405016 | 1.507716 | 4.248158 | 2.3e-05 | *** |
| I (AGE^2) | -0.070192 | 0.019324 | -3.632399 | 0.000290 | *** |
| WESTERN | 3.518334 | 2.184654 | 1.610477 | 0.107500 | |
| invMillsRatio | 11.187618 | 11.118788 | 1.006190 | 0.314483 | |
| --- | | | | | |
| Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1 | | | | | |
| Multiple R-Squared: 0.219131 Adjusted R-Squared: 0.214547 | | | | | |

A.2.2 Market Work

Appendix - Table 10: OLS on Market Work; FEMALES

| | Estimate | Std. Error | t value | Pr(> t) | |
|--------------------|------------|------------|---------|----------|-----|
| (Intercept) | 5.4900006 | 0.5729904 | 9.581 | < 2e-16 | *** |
| WEEKEND | -1.8024921 | 0.1030891 | -17.485 | < 2e-16 | *** |
| AGE | -0.0401123 | 0.0237044 | -1.692 | 0.090667 | . |
| I (AGE^2) | -0.0004065 | 0.0002561 | -1.588 | 0.112436 | |
| ED.APP | 0.2893079 | 0.1091498 | 2.651 | 0.008059 | ** |
| ED.VOC | 0.6212558 | 0.1404905 | 4.422 | 9.96e-06 | *** |
| ED.MAT | 0.1739121 | 0.2033176 | 0.855 | 0.392383 | |
| ED.UNI | 0.8175931 | 0.2743331 | 2.980 | 0.002892 | ** |
| SEMPLS | 1.6116254 | 0.1418014 | 11.365 | < 2e-16 | *** |
| HEMPLS | 0.8092179 | 0.4731699 | 1.710 | 0.087284 | . |
| P.AGEDIF | -0.0394831 | 0.0088280 | -4.472 | 7.89e-06 | *** |
| ED.HIGHA | 0.1571232 | 0.2235859 | 0.703 | 0.482246 | |
| P.SEMPLS | 0.3880440 | 0.1516488 | 2.559 | 0.010529 | * |
| P.MEMPLS | -0.4516239 | 0.1038510 | -4.349 | 1.39e-05 | *** |
| P.HEMPLS | -0.5854657 | 0.2019037 | -2.900 | 0.003750 | ** |
| P.CIT.Y | 1.1374513 | 0.9607533 | 1.184 | 0.236497 | |
| P.CIT.T | 2.6388315 | 1.8069305 | 1.460 | 0.144239 | |
| HOMEOWN | -0.1354293 | 0.1230235 | -1.101 | 0.271014 | |
| HOMESIZE | -0.0021251 | 0.0012683 | -1.676 | 0.093891 | . |
| HOME2OWN | 0.0963444 | 0.1563833 | 0.616 | 0.537868 | |
| CAROWN | -0.1619448 | 0.1140945 | -1.419 | 0.155841 | |
| CAR2OWN | 0.8514433 | 0.1080927 | 7.877 | 4.01e-15 | *** |
| DISAPERS | -0.0999910 | 0.0842051 | -1.187 | 0.235093 | |
| PHHELP.H | 0.2761624 | 0.2454790 | 1.125 | 0.260640 | |
| UHELP.H | 0.8025534 | 0.1699972 | 4.721 | 2.41e-06 | *** |
| CITY | 0.4972848 | 0.1606799 | 3.095 | 0.001979 | ** |
| LANDSIDE | -0.6777065 | 0.1633520 | -4.149 | 3.39e-05 | *** |
| WESTERN | -0.1761473 | 0.1053072 | -1.673 | 0.094443 | . |
| CIT.Y | 0.5929447 | 0.9686201 | 0.612 | 0.540461 | |
| CIT.T | -2.6509830 | 1.8302504 | -1.448 | 0.147555 | |
| C2.D | -2.3144217 | 0.1677343 | -13.798 | < 2e-16 | *** |
| C2_3.D | -0.6523604 | 0.1846318 | -3.533 | 0.000414 | *** |
| C4_6.D | -1.0569162 | 0.1471496 | -7.183 | 7.75e-13 | *** |
| C7_10.D | -0.8313287 | 0.1214918 | -6.843 | 8.62e-12 | *** |
| C11_15.D | -0.4817515 | 0.1132713 | -4.253 | 2.14e-05 | *** |
| C16_20.D | -0.1834999 | 0.1143526 | -1.605 | 0.108620 | |
| C21_27.D | -0.4969892 | 0.1288084 | -3.858 | 0.000115 | *** |
| ICC.FT | 0.9489642 | 0.3642354 | 2.605 | 0.009202 | ** |
| ICC.PT | -0.4260187 | 0.2353574 | -1.810 | 0.070336 | . |
| in.working.ageTRUE | 0.9103891 | 0.1969927 | 4.621 | 3.90e-06 | *** |
| HWAGE2 | 0.0010392 | 0.0020060 | 0.518 | 0.604425 | |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 3.104 on 5522 degrees of freedom
(20 observations deleted due to missingness)
Multiple R-Squared: 0.2399, Adjusted R-squared: 0.2344
F-statistic: 43.56 on 40 and 5522 DF, p-value: < 2.2e-16

Appendix - Table 11: OLS on Market Work; MALES

| | Estimate | Std. Error | t value | Pr(> t) | |
|--------------------|------------|------------|---------|----------|-----|
| (Intercept) | 7.9486205 | 0.7112982 | 11.175 | < 2e-16 | *** |
| WEEKEND | -4.3863042 | 0.1253972 | -34.979 | < 2e-16 | *** |
| AGE | 0.0061063 | 0.0296681 | 0.206 | 0.836938 | |
| I (AGE^2) | -0.0014490 | 0.0003041 | -4.765 | 1.93e-06 | *** |
| ED.APP | -0.1246213 | 0.1283089 | -0.971 | 0.331461 | |
| ED.VOC | 0.2618451 | 0.2257581 | 1.160 | 0.246161 | |
| ED.MAT | 0.0022083 | 0.2541048 | 0.009 | 0.993066 | |
| ED.UNI | -0.2370424 | 0.3146658 | -0.753 | 0.451293 | |
| SEMPLS | 1.3636335 | 0.1677331 | 8.130 | 5.26e-16 | *** |
| HEMPLS | 0.4266777 | 0.2452402 | 1.740 | 0.081944 | . |
| P.AGEDIF | -0.0351166 | 0.0110345 | -3.182 | 0.001469 | ** |
| ED.HIGHA | 0.1374464 | 0.2234275 | 0.615 | 0.538466 | |
| P.SEMPLS | 1.0421100 | 0.1782695 | 5.846 | 5.33e-09 | *** |
| P.MEMPLS | 0.1066929 | 0.1245898 | 0.856 | 0.391839 | |
| P.HEMPLS | -0.2428173 | 0.5759888 | -0.422 | 0.673358 | |
| P.CIT.Y | -1.4246030 | 1.1770236 | -1.210 | 0.226199 | |
| P.CIT.T | -2.9167729 | 2.2289205 | -1.309 | 0.190723 | |
| HOMEOWN | 0.2338167 | 0.1494687 | 1.564 | 0.117800 | |
| HOMESIZE | 0.0017891 | 0.0015435 | 1.159 | 0.246466 | |
| HOME2OWN | -0.1703103 | 0.1902007 | -0.895 | 0.370599 | |
| CAROWN | 0.0553814 | 0.1390942 | 0.398 | 0.690529 | |
| CAR2OWN | 0.2399259 | 0.1315849 | 1.823 | 0.068304 | . |
| DISAPERS | -0.1677925 | 0.1027535 | -1.633 | 0.102534 | |
| PHELP.H | 0.5101937 | 0.3005227 | 1.698 | 0.089623 | . |
| UHELP.H | 0.0670403 | 0.2065758 | 0.325 | 0.745548 | |
| CITY | 0.0435107 | 0.1946680 | 0.224 | 0.823145 | |
| LANDSIDE | -0.4060883 | 0.1985481 | -2.045 | 0.040874 | * |
| WESTERN | 0.2421042 | 0.1280353 | 1.891 | 0.058688 | . |
| CIT.Y | 2.2141451 | 1.1678691 | 1.896 | 0.058027 | . |
| CIT.T | 1.7933459 | 2.1998149 | 0.815 | 0.414978 | |
| C2.D | -0.0117737 | 0.2028148 | -0.058 | 0.953710 | |
| C2_3.D | 0.0270166 | 0.2249092 | 0.120 | 0.904391 | |
| C4_6.D | 0.5150911 | 0.1790703 | 2.876 | 0.004037 | ** |
| C7_10.D | 0.2536563 | 0.1480114 | 1.714 | 0.086629 | . |
| C11_15.D | 0.3690165 | 0.1381792 | 2.671 | 0.007595 | ** |
| C16_20.D | 0.7374433 | 0.1387886 | 5.313 | 1.12e-07 | *** |
| C21_27.D | 0.7517275 | 0.1542122 | 4.875 | 1.12e-06 | *** |
| ICC.FT | 0.2407046 | 0.4422986 | 0.544 | 0.586317 | |
| ICC.PT | -0.2528654 | 0.2864258 | -0.883 | 0.377366 | |
| in.working.ageTRUE | 0.9404289 | 0.2440302 | 3.854 | 0.000118 | *** |
| HWAGE2 | -0.0016666 | 0.0017573 | -0.948 | 0.342980 | |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

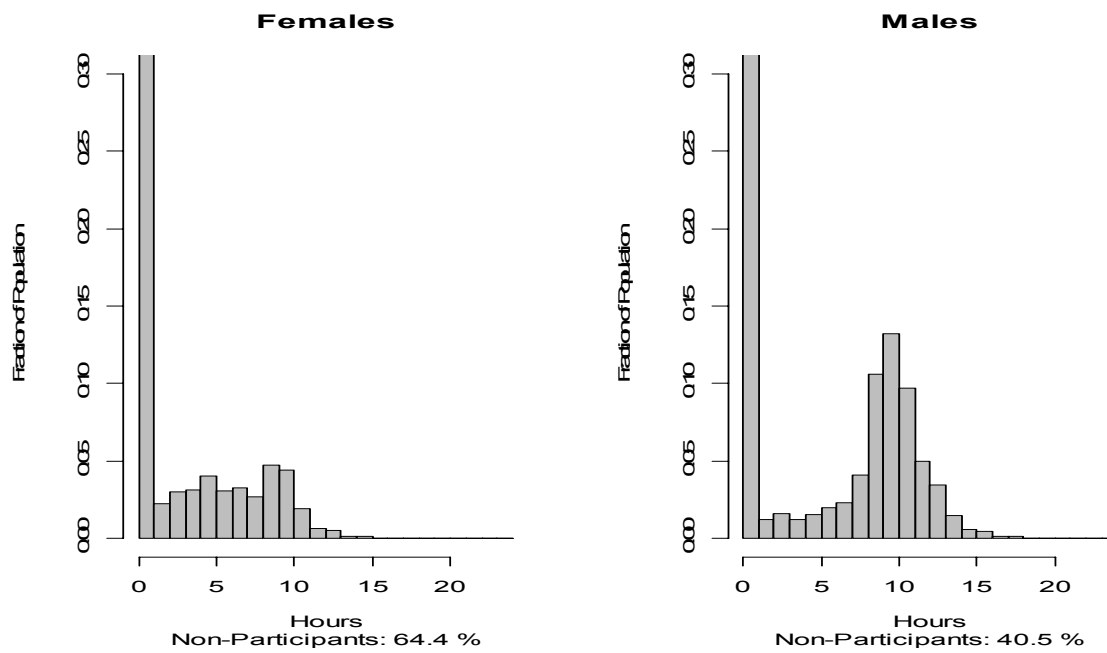
Residual standard error: 3.776 on 5522 degrees of freedom

(18 observations deleted due to missingness)

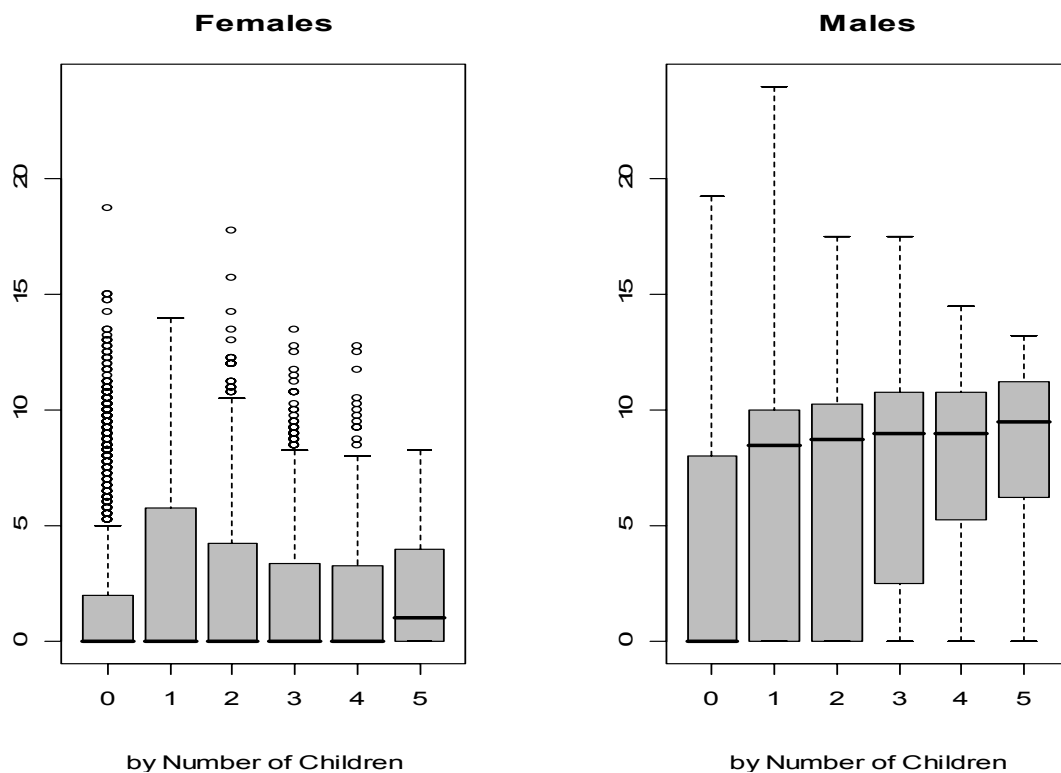
Multiple R-Squared: 0.4285, Adjusted R-squared: 0.4244

F-statistic: 103.5 on 40 and 5522 DF, p-value: < 2.2e-16

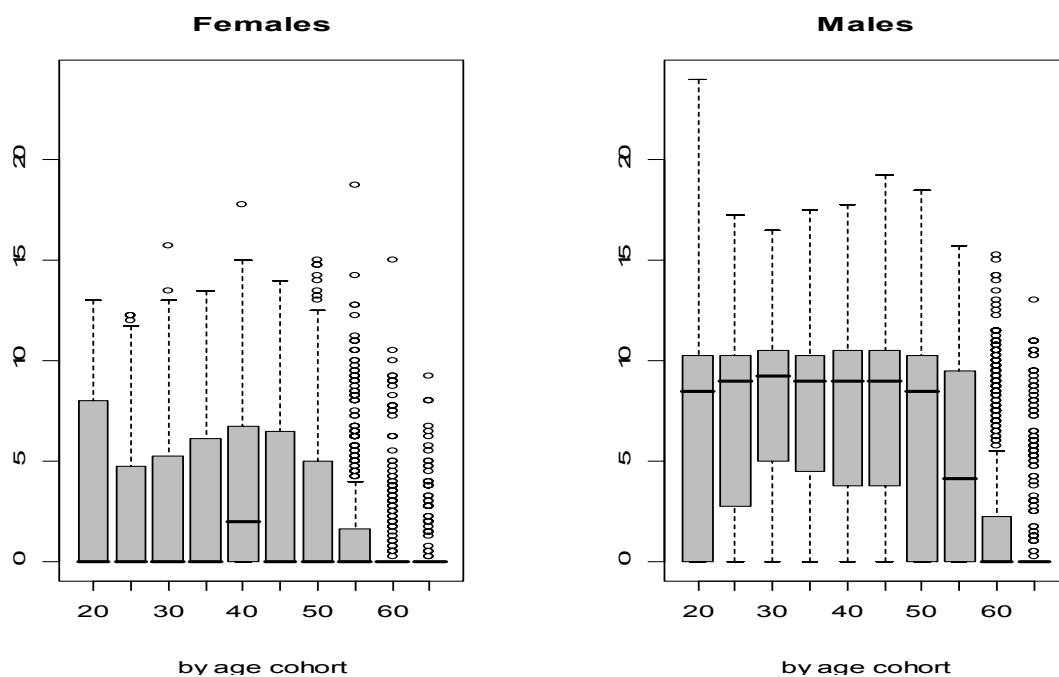
Appendix - Figure 3: Intensity-Distribution of Market Work



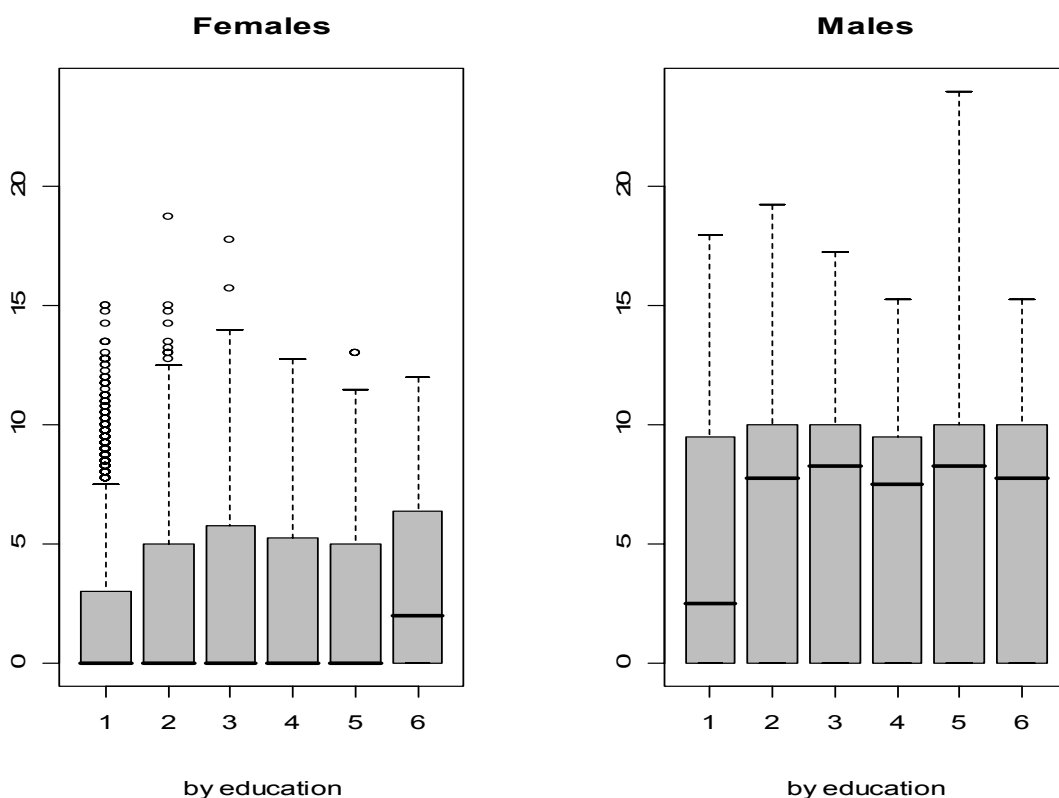
Appendix - Figure 4: Market Work by Number of Children



Appendix - Figure 5: Market Work by Age Cohort



Appendix - Figure 6: Market Work by Education⁴⁷



⁴⁷ scale: 1: Compulsory level
2: Apprenticeship
3: Vocational level
4: A-grade

5: A-grade (tech & comm)

6: Academic level

Appendix - Table 12: Market Work by Covariates; FEMALES

| Covariate | Description | Mean | SE | StdDev | P 10 | P 25 | P 50 | P 75 | P 90 |
|------------|---------------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| AGE | Age (10-years steps) | | | | | | | | |
| | 20 - 29 | 2.83 | 0.14 | 3.93 | 0.00 | 0.00 | 0.00 | 6.50 | 9.25 |
| | 30 - 39 | 2.86 | 0.12 | 3.87 | 0.00 | 0.00 | 0.00 | 6.00 | 9.25 |
| | 40 - 49 | 3.45 | 0.13 | 3.98 | 0.00 | 0.00 | 0.25 | 7.00 | 9.50 |
| | 50 - 59 | 2.02 | 0.12 | 3.52 | 0.00 | 0.00 | 0.00 | 3.00 | 8.50 |
| | 60 - 69 | 0.46 | 0.06 | 1.53 | 0.00 | 0.00 | 0.00 | 0.00 | 2.00 |
| | 70 - 79 | 0.11 | 0.05 | 0.78 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 80 - 89 | 0.05 | 0.07 | 0.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| ED | Education Level | | | | | | | | |
| | no education level received [D] | 2.30 | 0.05 | 3.64 | 0.00 | 0.00 | 0.00 | 4.50 | 9.00 |
| | compulsory level (Pflichtschule) | 1.97 | 0.07 | 3.37 | 0.00 | 0.00 | 0.00 | 3.00 | 8.25 |
| | apprenticeship (Lehrabschluss) | 2.42 | 0.11 | 3.81 | 0.00 | 0.00 | 0.00 | 5.00 | 9.00 |
| | vocational school (BMS) | 2.81 | 0.16 | 3.97 | 0.00 | 0.00 | 0.00 | 6.00 | 9.25 |
| | A-grade (AHS-Matura) | 2.50 | 0.27 | 3.84 | 0.00 | 0.00 | 0.00 | 5.25 | 9.18 |
| | A-grade (BHS-Matura) | 2.25 | 0.24 | 3.53 | 0.00 | 0.00 | 0.00 | 5.25 | 8.62 |
| | A-Grade | 2.37 | 0.18 | 3.68 | 0.00 | 0.00 | 0.00 | 5.25 | 9.00 |
| | University degree (Uni-Abschluss) | 3.38 | 0.25 | 3.75 | 0.00 | 0.00 | 1.00 | 6.75 | 8.50 |
| SEMPLS | Self employed [D] | 3.60 | 0.16 | 3.76 | 0.00 | 0.00 | 2.75 | 6.25 | 9.25 |
| MEMPLS | medium professional status [D] | 2.77 | 0.09 | 3.89 | 0.00 | 0.00 | 0.00 | 6.25 | 9.25 |
| HEMPLS | high professional status [D] | 3.62 | 0.63 | 4.58 | 0.00 | 0.00 | 0.00 | 8.50 | 10.75 |
| ED.HIGHA | person has significantly higher education compared to partner | 3.00 | 0.22 | 3.74 | 0.00 | 0.00 | 0.00 | 5.75 | 9.00 |
| ED.LOWER | person has significantly lower education compared to partner | 2.20 | 0.16 | 3.69 | 0.00 | 0.00 | 0.00 | 4.25 | 9.00 |
| P.SEMPLS | Partner is self employed | 3.32 | 0.15 | 3.84 | 0.00 | 0.00 | 2.00 | 6.25 | 9.25 |
| P.MEMPLS | Partner has medium prof.status | 2.13 | 0.07 | 3.55 | 0.00 | 0.00 | 0.00 | 4.25 | 8.85 |
| P.HEMPLS | Partner has high prof.status | 2.39 | 0.22 | 3.88 | 0.00 | 0.00 | 0.00 | 5.25 | 9.28 |
| P.CIT.Y | Partner is Yugoslavian citizen | 4.69 | 0.46 | 4.75 | 0.00 | 0.00 | 5.15 | 9.25 | 9.50 |
| P.CIT.T | Partner is Turkish citizen | 3.84 | 0.62 | 4.41 | 0.00 | 0.00 | 0.00 | 8.30 | 9.50 |
| HOMEOWN | Is HH owner of dwelling? [D] | 2.23 | 0.06 | 3.52 | 0.00 | 0.00 | 0.00 | 4.25 | 8.50 |
| HOME2OWN | Has HH second dwelling? [D] | 2.29 | 0.17 | 3.64 | 0.00 | 0.00 | 0.00 | 4.50 | 9.00 |
| CAROWN | Does HH own a car? [D] | 2.46 | 0.06 | 3.68 | 0.00 | 0.00 | 0.00 | 5.00 | 9.00 |
| CAR2OWN | Does HH own a second car? [D] | 3.11 | 0.11 | 3.93 | 0.00 | 0.00 | 0.00 | 6.50 | 9.25 |
| DISABLED | | | | | | | | | |
| | Disabled? - no disabled person in HH | 2.35 | 0.06 | 3.67 | 0.00 | 0.00 | 0.00 | 4.75 | 9.00 |
| | Disabled? - temporary help needed | 1.60 | 0.25 | 2.94 | 0.00 | 0.00 | 0.00 | 2.25 | 6.67 |
| | Disabled? - permanent help needed | 1.92 | 0.27 | 3.38 | 0.00 | 0.00 | 0.00 | 4.18 | 8.41 |
| | Disabled? - bounded to bed | 1.61 | 0.37 | 2.93 | 0.00 | 0.00 | 0.00 | 2.48 | 6.00 |
| PHELP.H | HH receives paid help for HP & CC | 2.77 | 0.27 | 3.75 | 0.00 | 0.00 | 0.00 | 6.00 | 8.00 |
| UHELP.H | HH receives unpaid help for HP & CC | 2.96 | 0.21 | 3.90 | 0.00 | 0.00 | 0.00 | 7.00 | 9.25 |
| GHELP.H | HH gives HP& CC-help to other HH | 1.68 | 0.13 | 3.27 | 0.00 | 0.00 | 0.00 | 1.00 | 8.01 |
| HELP.P | Person gives HP& CC-help to other HH | 1.63 | 0.17 | 3.22 | 0.00 | 0.00 | 0.00 | 0.38 | 8.19 |
| CITY | City [D] | 2.32 | 0.09 | 3.75 | 0.00 | 0.00 | 0.00 | 5.00 | 9.00 |
| LANDSIDE | Landside [D] | 1.94 | 0.13 | 3.45 | 0.00 | 0.00 | 0.00 | 3.00 | 8.25 |
| WESTERN | Western Area (V,T,Sbg) | 2.48 | 0.10 | 3.82 | 0.00 | 0.00 | 0.00 | 5.50 | 9.00 |
| CIT.Y | Yugoslavian Citizen | 4.38 | 0.50 | 4.82 | 0.00 | 0.00 | 0.00 | 8.75 | 9.75 |
| CIT.T | Turkish citizen | 3.68 | 0.61 | 4.33 | 0.00 | 0.00 | 0.00 | 8.25 | 9.40 |
| C2.D | D:children in HH aged up to 2 | 1.13 | 0.11 | 2.72 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 |
| C2_3.D | D:children in HH aged 2-3y | 1.86 | 0.16 | 3.39 | 0.00 | 0.00 | 0.00 | 2.75 | 8.16 |
| C4_6.D | D:children in HH aged 4-6y | 2.19 | 0.14 | 3.29 | 0.00 | 0.00 | 0.00 | 4.50 | 8.00 |
| C7_10.D | D:children in HH aged 7-10y | 2.46 | 0.12 | 3.48 | 0.00 | 0.00 | 0.00 | 4.75 | 8.75 |
| C11_15.D | D:children in HH aged 11-15y | 2.63 | 0.13 | 3.60 | 0.00 | 0.00 | 0.00 | 5.50 | 8.50 |
| C7_15.D | D:children in HH aged 7-15y | 2.57 | 0.10 | 3.56 | 0.00 | 0.00 | 0.00 | 5.00 | 8.50 |
| C16-18.D | D:children in HH aged 16-18y | 2.64 | 0.16 | 3.62 | 0.00 | 0.00 | 0.00 | 5.25 | 8.75 |
| C16_20.D | D:children in HH aged 16-20y | 2.77 | 0.13 | 3.70 | 0.00 | 0.00 | 0.00 | 5.50 | 9.00 |
| C21_27.D | D:children in HH aged 21-27y | 2.48 | 0.13 | 3.51 | 0.00 | 0.00 | 0.00 | 5.00 | 8.50 |
| ICC | At least one child not in ICC | 1.97 | 0.10 | 3.24 | 0.00 | 0.00 | 0.00 | 4.00 | 7.75 |
| ICC.FT | (All) child(ren) in fulltime ICC | 4.58 | 0.44 | 4.28 | 0.00 | 0.00 | 6.25 | 8.50 | 9.50 |
| ICC.PT | (At least one) child in parttime ICC | 2.41 | 0.25 | 3.54 | 0.00 | 0.00 | 0.00 | 5.00 | 8.50 |
| ALL | | 2.30 | 0.05 | 3.64 | 0.00 | 0.00 | 0.00 | 4.50 | 9.00 |

Appendix - Table 13: Market Work by Covariates; MALES

| Covariate | Description | Mean | SE | StdDev | P 10 | P 25 | P 50 | P 75 | P 90 |
|------------|---------------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| AGE | Age (10-years steps) | | | | | | | | |
| | 20 - 29 | 6.59 | 0.20 | 4.92 | 0.00 | 0.00 | 8.75 | 10.00 | 12.00 |
| | 30 - 39 | 6.77 | 0.13 | 4.66 | 0.00 | 0.00 | 8.75 | 10.25 | 11.75 |
| | 40 - 49 | 6.61 | 0.14 | 4.87 | 0.00 | 0.00 | 8.50 | 10.25 | 12.00 |
| | 50 - 59 | 5.72 | 0.16 | 4.98 | 0.00 | 0.00 | 7.75 | 10.00 | 11.50 |
| | 60 - 69 | 1.38 | 0.12 | 3.18 | 0.00 | 0.00 | 0.00 | 0.00 | 7.00 |
| | 70 - 79 | 0.71 | 0.12 | 2.33 | 0.00 | 0.00 | 0.00 | 0.00 | 1.75 |
| | 80 - 89 | 0.22 | 0.12 | 1.25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| ED | Education Level | | | | | | | | |
| | no education level received [D] | 5.18 | 0.07 | 5.01 | 0.00 | 0.00 | 5.50 | 9.75 | 11.50 |
| | compulsory level (Pflichtschule) | 4.56 | 0.14 | 4.98 | 0.00 | 0.00 | 1.89 | 9.50 | 11.25 |
| | apprenticeship (Lehrabschluss) | 5.28 | 0.10 | 5.02 | 0.00 | 0.00 | 6.50 | 9.75 | 11.25 |
| | vocational school (BMS) | 5.63 | 0.24 | 4.89 | 0.00 | 0.00 | 7.50 | 9.75 | 11.25 |
| | A-grade (AHS-Matura) | 4.73 | 0.34 | 4.99 | 0.00 | 0.00 | 1.34 | 9.25 | 11.50 |
| | A-grade (BHS-Matura) | 5.86 | 0.27 | 5.20 | 0.00 | 0.00 | 8.00 | 10.00 | 11.75 |
| | A-Grade | 5.45 | 0.21 | 5.15 | 0.00 | 0.00 | 6.50 | 9.75 | 11.75 |
| | University degree (Uni-Abschluss) | 5.75 | 0.26 | 4.75 | 0.00 | 0.00 | 6.75 | 9.75 | 11.25 |
| SEMPLS | Self employed [D] | 6.54 | 0.18 | 4.95 | 0.00 | 0.00 | 8.00 | 11.00 | 12.25 |
| MEMPLS | medium professional status [D] | 5.29 | 0.10 | 4.95 | 0.00 | 0.00 | 7.00 | 9.75 | 11.00 |
| HEMPLS | high professional status [D] | 5.49 | 0.26 | 4.99 | 0.00 | 0.00 | 6.75 | 10.00 | 11.50 |
| ED.HIGHA | person has significantly higher education compared to partner | 5.43 | 0.21 | 5.09 | 0.00 | 0.00 | 6.50 | 9.75 | 11.50 |
| ED.LOWER | person has significantly lower education compared to partner | 4.92 | 0.26 | 4.74 | 0.00 | 0.00 | 5.50 | 9.25 | 10.50 |
| P.SEMPLS | Partner is self employed | 6.54 | 0.20 | 4.98 | 0.00 | 0.48 | 8.00 | 11.00 | 12.50 |
| P.MEMPLS | Partner has medium prof.status | 5.58 | 0.11 | 4.87 | 0.00 | 0.00 | 7.50 | 9.75 | 11.25 |
| P.HEMPLS | Partner has high prof.status | 5.75 | 0.60 | 4.66 | 0.00 | 0.00 | 8.00 | 9.71 | 11.39 |
| P.CIT.Y | Partner is Yugoslavian citizen | 6.42 | 0.44 | 4.62 | 0.00 | 0.00 | 8.96 | 10.25 | 10.75 |
| P.CIT.T | Partner is Turkish citizen | 5.62 | 0.64 | 5.03 | 0.00 | 0.00 | 8.25 | 10.50 | 11.00 |
| HOMEOWN | Is HH owner of dwelling? [D] | 5.38 | 0.09 | 5.06 | 0.00 | 0.00 | 6.00 | 10.00 | 11.75 |
| HOME2OWN | Has HH second dwelling? [D] | 4.58 | 0.23 | 5.07 | 0.00 | 0.00 | 0.25 | 9.50 | 11.16 |
| CAROWN | Does HH own a car? [D] | 5.63 | 0.08 | 4.98 | 0.00 | 0.00 | 7.25 | 10.00 | 11.50 |
| CAR2OWN | Does HH own a second car? [D] | 6.18 | 0.13 | 5.01 | 0.00 | 0.00 | 8.25 | 10.50 | 12.00 |
| DISABLED | Disabled? - no disabled person in HH | 5.27 | 0.07 | 4.99 | 0.00 | 0.00 | 6.25 | 9.75 | 11.25 |
| | Disabled? - temporary help needed | 3.42 | 0.40 | 4.87 | 0.00 | 0.00 | 0.00 | 8.75 | 11.00 |
| | Disabled? - permanent help needed | 4.10 | 0.40 | 5.23 | 0.00 | 0.00 | 0.00 | 9.50 | 12.25 |
| | Disabled? - bounded to bed | 5.03 | 0.61 | 5.10 | 0.00 | 0.00 | 3.79 | 10.25 | 11.75 |
| PHHELP.H | HH receives paid help for HP & CC | 5.65 | 0.34 | 4.95 | 0.00 | 0.00 | 6.00 | 10.25 | 11.50 |
| UHHELP.H | HH receives unpaid help for HP & CC | 5.86 | 0.25 | 4.93 | 0.00 | 0.00 | 7.75 | 10.00 | 11.50 |
| GHELP.H | HH gives HP&CC-help to other HH | 4.12 | 0.19 | 4.85 | 0.00 | 0.00 | 0.00 | 9.00 | 10.75 |
| HELP.P | Person gives HP&CC-help to other HH | 4.52 | 0.31 | 4.92 | 0.00 | 0.00 | 0.50 | 9.25 | 10.75 |
| CITY | City [D] | 4.76 | 0.11 | 4.92 | 0.00 | 0.00 | 2.75 | 9.50 | 10.75 |
| LANDSIDE | Landside [D] | 4.90 | 0.17 | 4.80 | 0.00 | 0.00 | 5.25 | 9.25 | 10.50 |
| WESTERN | Western Area (V,T,Sbg) | 4.99 | 0.13 | 5.02 | 0.00 | 0.00 | 4.50 | 9.50 | 11.00 |
| CIT.Y | Yugoslavian Citizen | 6.80 | 0.40 | 4.49 | 0.00 | 0.00 | 9.00 | 10.25 | 10.75 |
| CIT.T | Turkish citizen | 5.86 | 0.63 | 4.94 | 0.00 | 0.00 | 8.25 | 10.50 | 11.00 |
| C2.D | D:children in HH aged up to 2 | 6.77 | 0.18 | 4.79 | 0.00 | 0.00 | 8.50 | 10.50 | 12.25 |
| C2_3.D | D:children in HH aged 2-3y | 6.64 | 0.22 | 4.90 | 0.00 | 0.00 | 8.50 | 10.50 | 12.00 |
| C4_6.D | D:children in HH aged 4-6y | 7.22 | 0.18 | 4.70 | 0.00 | 1.00 | 9.00 | 10.50 | 12.00 |
| C7_10.D | D:children in HH aged 7-10y | 6.60 | 0.15 | 4.75 | 0.00 | 0.00 | 8.50 | 10.25 | 11.75 |
| C11_15.D | D:children in HH aged 11-15y | 6.54 | 0.16 | 4.87 | 0.00 | 0.00 | 8.50 | 10.25 | 12.00 |
| C7_15.D | D:children in HH aged 7-15y | 6.52 | 0.12 | 4.80 | 0.00 | 0.00 | 8.50 | 10.25 | 11.75 |
| C16-18.D | D:children in HH aged 16-18y | 6.23 | 0.20 | 4.90 | 0.00 | 0.00 | 8.00 | 10.25 | 12.00 |
| C16_20.D | D:children in HH aged 16-20y | 6.40 | 0.16 | 4.90 | 0.00 | 0.00 | 8.25 | 10.25 | 12.00 |
| C21_27.D | D:children in HH aged 21-27y | 5.64 | 0.17 | 4.99 | 0.00 | 0.00 | 7.00 | 10.00 | 11.50 |
| ICC | At least one child not in ICC | 6.19 | 0.14 | 4.88 | 0.00 | 0.00 | 8.25 | 10.00 | 12.00 |
| ICC.FT | (All) child(ren) in fulltime ICC | 5.73 | 0.47 | 4.97 | 0.00 | 0.00 | 8.50 | 10.25 | 10.76 |
| ICC.PT | (At least one) child in parttime ICC | 6.55 | 0.31 | 4.79 | 0.00 | 0.00 | 8.50 | 10.50 | 11.50 |
| ALL | | 5.18 | 0.07 | 5.01 | 0.00 | 0.00 | 5.50 | 9.75 | 11.50 |

A 2.3 Home Production

Appendix - Table 14: OLS on Home Production; FEMALES

| | Estimate | Std. Error | t value | Pr(> t) | |
|--------------------|------------|------------|---------|----------|-----|
| (Intercept) | 1.6671944 | 0.4656074 | 3.581 | 0.000346 | *** |
| WEEKEND | -0.9838397 | 0.0837694 | -11.745 | < 2e-16 | *** |
| AGE | 0.1407812 | 0.0192620 | 7.309 | 3.08e-13 | *** |
| I (AGE^2) | -0.0011142 | 0.0002081 | -5.355 | 8.92e-08 | *** |
| ED.APP | -0.1847114 | 0.0886943 | -2.083 | 0.037337 | * |
| ED.VOC | -0.4842601 | 0.1141614 | -4.242 | 2.25e-05 | *** |
| ED.MAT | -0.8319355 | 0.1652143 | -5.035 | 4.92e-07 | *** |
| ED.UNI | -1.1099862 | 0.2229208 | -4.979 | 6.58e-07 | *** |
| SEMPLS | -0.5833032 | 0.1152267 | -5.062 | 4.28e-07 | *** |
| HEMPLS | -0.7671924 | 0.3844940 | -1.995 | 0.046056 | * |
| P.AGEDIF | 0.0123716 | 0.0071735 | 1.725 | 0.084652 | . |
| ED.HIGHA | -0.0311033 | 0.1816841 | -0.171 | 0.864077 | |
| P.SEMPLS | -0.0665614 | 0.1232286 | -0.540 | 0.589118 | |
| P.MEMPLS | 0.1699508 | 0.0843885 | 2.014 | 0.044067 | * |
| P.HEMPLS | 0.5129753 | 0.1640653 | 3.127 | 0.001777 | ** |
| P.CIT.Y | 0.4680885 | 0.7807003 | 0.600 | 0.548814 | |
| P.CIT.T | 0.1356010 | 1.4682971 | 0.092 | 0.926421 | |
| HOMEOWN | 0.3091283 | 0.0999679 | 3.092 | 0.001996 | ** |
| HOMESIZE | 0.0009422 | 0.0010306 | 0.914 | 0.360662 | |
| HOME2OWN | -0.0955390 | 0.1270758 | -0.752 | 0.452187 | |
| CAROWN | -0.0177775 | 0.0927123 | -0.192 | 0.847946 | |
| CAR2OWN | -0.2721024 | 0.0878352 | -3.098 | 0.001959 | ** |
| DISAPERS | -0.1637458 | 0.0684244 | -2.393 | 0.016740 | * |
| PHELP.H | -0.9034212 | 0.1994743 | -4.529 | 6.05e-06 | *** |
| UHELP.H | -0.4226691 | 0.1381384 | -3.060 | 0.002226 | ** |
| CITY | -0.5775957 | 0.1305671 | -4.424 | 9.89e-06 | *** |
| LANDSIDE | 0.4893396 | 0.1327385 | 3.686 | 0.000230 | *** |
| WESTERN | -0.1002919 | 0.0855718 | -1.172 | 0.241239 | |
| CIT.Y | -1.1303554 | 0.7870928 | -1.436 | 0.151026 | |
| CIT.T | -0.8876251 | 1.4872466 | -0.597 | 0.550649 | |
| C2.D | 0.7104335 | 0.1362995 | 5.212 | 1.93e-07 | *** |
| C2_3.D | 0.3599041 | 0.1500303 | 2.399 | 0.016478 | * |
| C4_6.D | 0.3840041 | 0.1195725 | 3.211 | 0.001328 | ** |
| C7_10.D | 0.5265522 | 0.0987232 | 5.334 | 1.00e-07 | *** |
| C11_15.D | 0.6941648 | 0.0920434 | 7.542 | 5.39e-14 | *** |
| C16_20.D | 0.4802239 | 0.0929220 | 5.168 | 2.45e-07 | *** |
| C21_27.D | 0.8791180 | 0.1046686 | 8.399 | < 2e-16 | *** |
| ICC.FT | 0.0948988 | 0.2959747 | 0.321 | 0.748502 | |
| ICC.PT | 0.1516946 | 0.1912495 | 0.793 | 0.427709 | |
| in.working.ageTRUE | -0.2514815 | 0.1600746 | -1.571 | 0.116234 | |
| HWAGE2 | -0.0001233 | 0.0016300 | -0.076 | 0.939728 | |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 2.522 on 5522 degrees of freedom
(20 observations deleted due to missingness)

Multiple R-Squared: 0.1341, Adjusted R-squared: 0.1278

F-statistic: 21.38 on 40 and 5522 DF, p-value: < 2.2e-16

Appendix - Table 15: OLS on Home Production; MALES

| | Estimate | Std. Error | t value | Pr(> t) | |
|--------------------|------------|------------|---------|----------|-----|
| (Intercept) | -0.3146344 | 0.4219164 | -0.746 | 0.455864 | |
| WEEKEND | 0.1443922 | 0.0743811 | 1.941 | 0.052279 | . |
| AGE | 0.0545460 | 0.0175980 | 3.100 | 0.001948 | ** |
| I (AGE^2) | -0.0002372 | 0.0001804 | -1.315 | 0.188599 | |
| ED.APP | 0.0553558 | 0.0761082 | 0.727 | 0.467055 | |
| ED.VOC | -0.1914715 | 0.1339115 | -1.430 | 0.152821 | |
| ED.MAT | -0.0518033 | 0.1507258 | -0.344 | 0.731091 | |
| ED.UNI | -0.0840884 | 0.1866484 | -0.451 | 0.652355 | |
| SEMPLS | -0.5946323 | 0.0994932 | -5.977 | 2.42e-09 | *** |
| HEMPLS | -0.2062724 | 0.1454676 | -1.418 | 0.156248 | |
| P.AGEDIF | 0.0161940 | 0.0065453 | 2.474 | 0.013385 | * |
| ED.HIGHA | -0.0634710 | 0.1325291 | -0.479 | 0.632013 | |
| P.SEMPLS | -0.2711209 | 0.1057430 | -2.564 | 0.010375 | * |
| P.MEMPLS | 0.0152528 | 0.0739022 | 0.206 | 0.836492 | |
| P.HEMPLS | -0.1256896 | 0.3416557 | -0.368 | 0.712974 | |
| P.CIT.Y | -0.1132590 | 0.6981679 | -0.162 | 0.871136 | |
| P.CIT.T | -1.6419261 | 1.3221151 | -1.242 | 0.214329 | |
| HOMEOWN | 0.4202637 | 0.0886594 | 4.740 | 2.19e-06 | *** |
| HOMESIZE | -0.0000632 | 0.0009156 | -0.069 | 0.944967 | |
| HOME2OWN | 0.1063303 | 0.1128202 | 0.942 | 0.345990 | |
| CAROWN | 0.1653800 | 0.0825056 | 2.004 | 0.045069 | * |
| CAR2OWN | -0.0109951 | 0.0780514 | -0.141 | 0.887978 | |
| DISAPERS | -0.1641707 | 0.0609497 | -2.694 | 0.007091 | ** |
| PHELP.H | -0.2814804 | 0.1782592 | -1.579 | 0.114382 | |
| UHELP.H | 0.1752624 | 0.1225333 | 1.430 | 0.152681 | |
| CITY | 0.0695409 | 0.1154700 | 0.602 | 0.547038 | |
| LANDSIDE | 0.1152110 | 0.1177716 | 0.978 | 0.327990 | |
| WESTERN | -0.0442010 | 0.0759459 | -0.582 | 0.560587 | |
| CIT.Y | -0.1552281 | 0.6927378 | -0.224 | 0.822704 | |
| CIT.T | 1.0488460 | 1.3048507 | 0.804 | 0.421544 | |
| C2.D | 0.0019449 | 0.1203024 | 0.016 | 0.987102 | |
| C2_3.D | -0.2027785 | 0.1334080 | -1.520 | 0.128571 | |
| C4_6.D | -0.1532399 | 0.1062181 | -1.443 | 0.149164 | |
| C7_10.D | -0.0734729 | 0.0877950 | -0.837 | 0.402702 | |
| C11_15.D | -0.1553279 | 0.0819629 | -1.895 | 0.058131 | . |
| C16_20.D | -0.2994909 | 0.0823244 | -3.638 | 0.000277 | *** |
| C21_27.D | -0.1381426 | 0.0914731 | -1.510 | 0.131050 | |
| ICC.FT | 0.0368731 | 0.2623555 | 0.141 | 0.888233 | |
| ICC.PT | -0.1082548 | 0.1698974 | -0.637 | 0.524036 | |
| in.working.ageTRUE | -0.1069642 | 0.1447499 | -0.739 | 0.459963 | |
| HWAGE2 | 0.0001466 | 0.0010424 | 0.141 | 0.888119 | |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

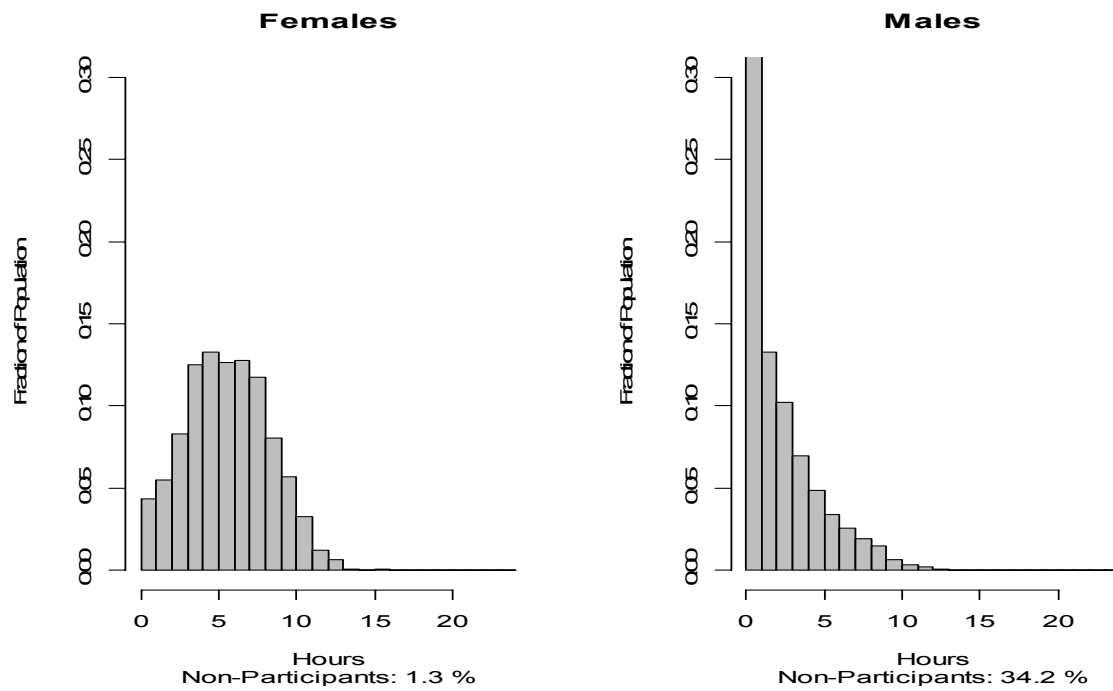
Residual standard error: 2.24 on 5522 degrees of freedom

(18 observations deleted due to missingness)

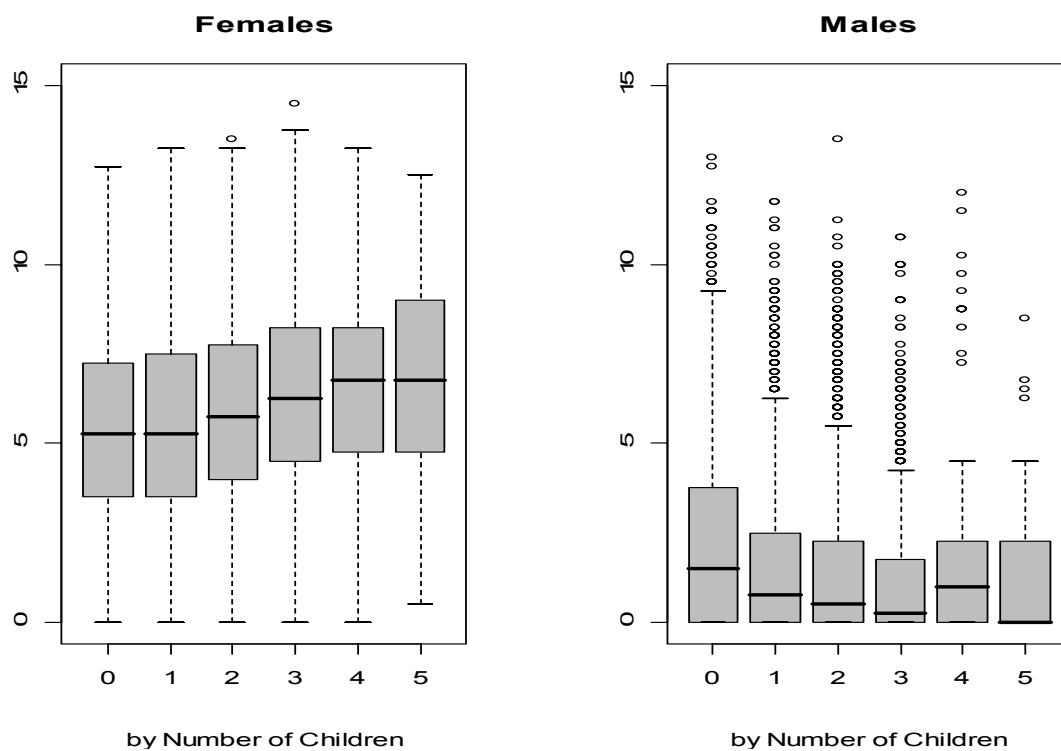
Multiple R-Squared: 0.07444, Adjusted R-squared: 0.06774

F-statistic: 11.1 on 40 and 5522 DF, p-value: < 2.2e-16

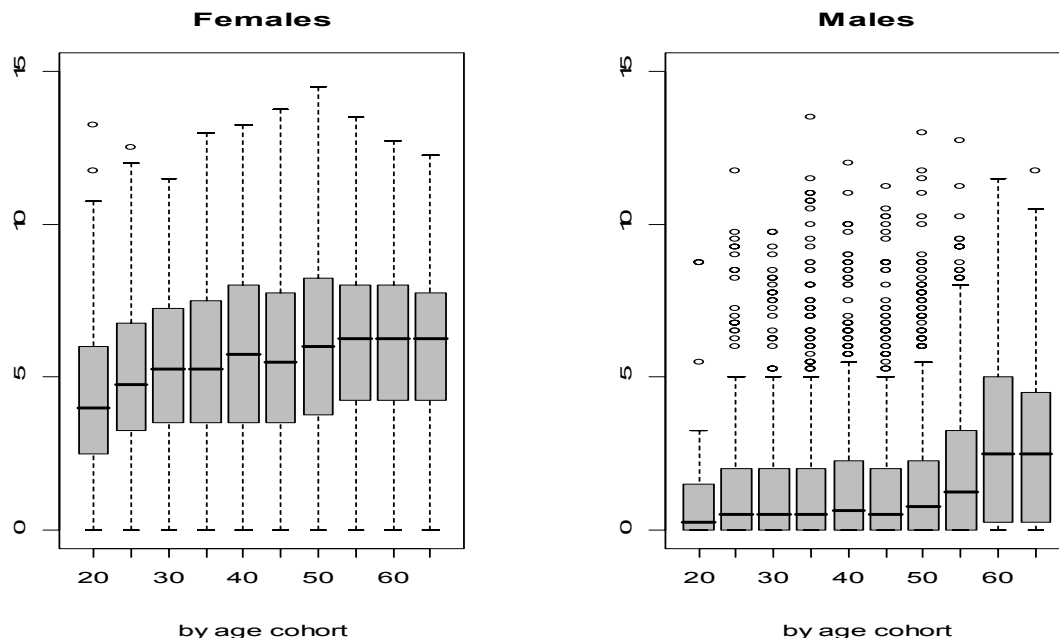
Appendix - Figure 7: Intensity-Distribution of Home Production



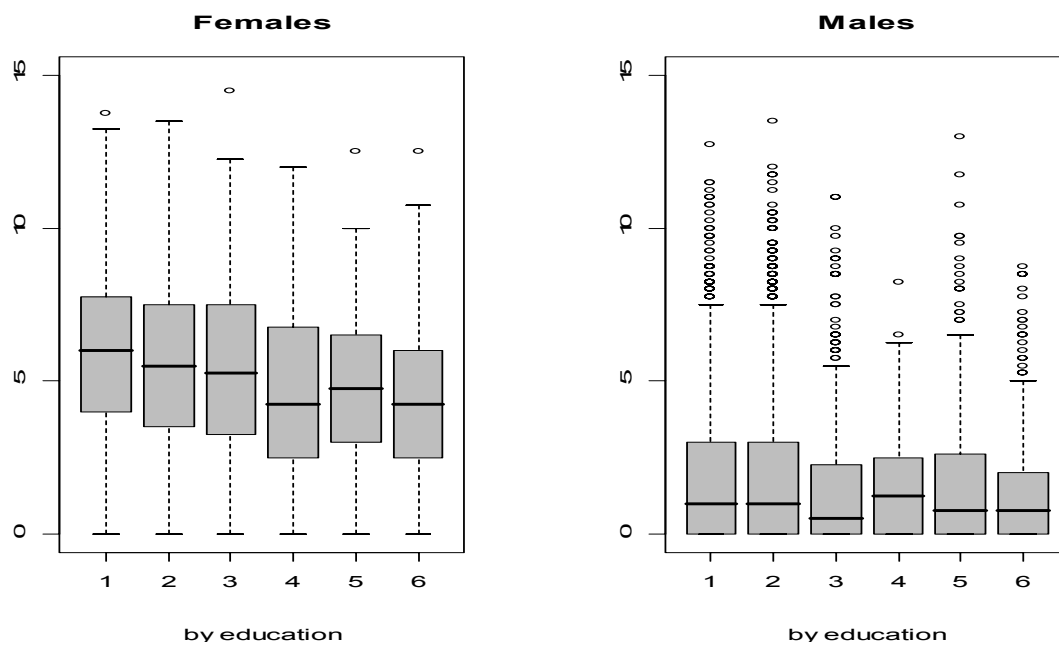
Appendix - Figure 8: Home Production by Number of Children



Appendix - Figure 9: Home Production by Age Cohort



Appendix - Figure 10: Home Production by Education⁴⁸



⁴⁸ scale: 1: Compulsory level
2: Apprenticeship
3: Vocational level
4: A-grade

5: A-grade (tech & comm)

6: Academic level

Appendix - Table 16: Home Production by Covariates; FEMALES

| Covariate | Description | Mean | SE | StdDev | P 10 | P 25 | P 50 | P 75 | P 90 |
|------------|---------------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| AGE | Age (10-years steps) | | | | | | | | |
| | 20 - 29 | 4.45 | 0.09 | 2.39 | 1.50 | 2.75 | 4.25 | 6.00 | 7.59 |
| | 30 - 39 | 5.21 | 0.08 | 2.71 | 1.75 | 3.25 | 5.25 | 7.00 | 8.75 |
| | 40 - 49 | 5.54 | 0.09 | 2.88 | 2.00 | 3.25 | 5.25 | 7.50 | 9.75 |
| | 50 - 59 | 6.09 | 0.10 | 2.80 | 2.50 | 4.00 | 6.00 | 8.00 | 9.80 |
| | 60 - 69 | 5.98 | 0.10 | 2.61 | 2.50 | 4.00 | 6.25 | 7.75 | 9.25 |
| | 70 - 79 | 5.62 | 0.14 | 2.27 | 2.75 | 4.25 | 5.50 | 7.25 | 8.50 |
| | 80 - 89 | 4.86 | 0.30 | 2.32 | 1.02 | 4.00 | 4.75 | 6.50 | 7.99 |
| ED | Education Level | | | | | | | | |
| | no education level received [D] | 5.42 | 0.04 | 2.73 | 2.00 | 3.50 | 5.25 | 7.25 | 9.00 |
| | compulsory level (Pflichttschule) | 5.89 | 0.06 | 2.71 | 2.50 | 3.75 | 5.75 | 7.75 | 9.50 |
| | apprenticeship (Lehrabschluss) | 5.35 | 0.08 | 2.69 | 2.00 | 3.50 | 5.25 | 7.25 | 8.75 |
| | vocational school (BMS) | 4.98 | 0.11 | 2.84 | 1.50 | 2.75 | 4.75 | 7.25 | 8.75 |
| | A-grade (AHS-Matura) | 4.15 | 0.19 | 2.64 | 1.25 | 2.00 | 3.50 | 5.75 | 7.50 |
| | A-grade (BHS-Matura) | 4.68 | 0.15 | 2.17 | 1.50 | 3.25 | 4.75 | 6.00 | 7.25 |
| | A-Grade | 4.42 | 0.12 | 2.42 | 1.35 | 2.54 | 4.25 | 6.00 | 7.50 |
| | University degree (Uni-Abschluss) | 4.40 | 0.16 | 2.38 | 1.75 | 2.50 | 4.25 | 5.62 | 7.75 |
| SEMPLS | Self employed [D] | 5.39 | 0.12 | 2.77 | 1.50 | 3.50 | 5.16 | 7.25 | 9.25 |
| MEMPLS | medium professional status [D] | 4.89 | 0.06 | 2.62 | 1.50 | 3.00 | 4.75 | 6.75 | 8.50 |
| HEMPLS | high professional status [D] | 3.80 | 0.29 | 2.11 | 1.27 | 2.00 | 3.25 | 5.25 | 7.00 |
| ED.HIGHA | person has significantly higher education compared to partner | 4.55 | 0.15 | 2.47 | 1.25 | 2.75 | 4.50 | 6.50 | 7.75 |
| ED.LOWER | person has significantly lower education compared to partner | 5.47 | 0.13 | 2.97 | 1.75 | 3.00 | 5.50 | 7.50 | 9.75 |
| P.SEMPLS | Partner is self employed | 5.17 | 0.11 | 2.84 | 1.25 | 3.00 | 5.00 | 7.25 | 9.00 |
| P.MEMPLS | Partner has medium prof.status | 5.45 | 0.06 | 2.74 | 2.00 | 3.50 | 5.25 | 7.50 | 9.25 |
| P.HEMPLS | Partner has high prof.status | 5.50 | 0.15 | 2.68 | 2.00 | 3.25 | 5.50 | 7.25 | 9.50 |
| P.CIT.Y | Partner is Yugoslavian citizen | 4.52 | 0.24 | 2.49 | 1.50 | 2.75 | 4.00 | 6.25 | 8.00 |
| P.CIT.T | Partner is Turkish citizen | 4.48 | 0.48 | 3.39 | 0.00 | 2.25 | 3.75 | 7.75 | 8.75 |
| HOMEOWN | Is HH owner of dwelling? [D] | 5.68 | 0.05 | 2.77 | 2.00 | 3.75 | 5.50 | 7.75 | 9.50 |
| HOME2OWN | Has HH second dwelling? [D] | 5.16 | 0.13 | 2.70 | 1.50 | 3.25 | 5.00 | 6.97 | 8.75 |
| CAROWN | Does HH own a car? [D] | 5.49 | 0.05 | 2.74 | 2.00 | 3.50 | 5.50 | 7.50 | 9.25 |
| CAR2OWN | Does HH own a second car? [D] | 5.60 | 0.08 | 2.96 | 1.75 | 3.25 | 5.50 | 7.75 | 9.75 |
| DISABLED | | | | | | | | | |
| | Disabled? - no disabled person in HH | 5.43 | 0.04 | 2.72 | 2.00 | 3.50 | 5.25 | 7.25 | 9.00 |
| | Disabled? - temporary help needed | 5.40 | 0.25 | 3.00 | 1.35 | 3.25 | 5.25 | 7.50 | 10.00 |
| | Disabled? - permanent help needed | 5.33 | 0.21 | 2.71 | 2.00 | 3.75 | 5.50 | 7.00 | 8.75 |
| | Disabled? - bounded to bed | 4.76 | 0.37 | 2.97 | 0.00 | 2.00 | 4.94 | 7.25 | 8.00 |
| PHHELP.H | HH receives paid help for HP & CC | 4.18 | 0.19 | 2.66 | 1.00 | 2.21 | 4.00 | 5.75 | 8.00 |
| UHHELP.H | HH receives unpaid help for HP & CC | 4.82 | 0.14 | 2.66 | 1.50 | 2.75 | 4.75 | 6.75 | 8.25 |
| GHELP.H | HH gives HP& CC-help to other HH | 5.63 | 0.11 | 2.61 | 2.25 | 3.50 | 5.66 | 7.50 | 9.00 |
| HELP.P | Person gives HP& CC-help to other HH | 5.80 | 0.14 | 2.59 | 2.50 | 3.75 | 5.75 | 7.50 | 9.25 |
| CITY | City [D] | 4.98 | 0.06 | 2.61 | 1.75 | 3.00 | 4.75 | 6.75 | 8.50 |
| LANDSIDE | Landside [D] | 5.51 | 0.10 | 2.62 | 2.00 | 3.50 | 5.25 | 7.50 | 9.00 |
| WESTERN | Western Area (V,T,Sbg) | 4.95 | 0.07 | 2.62 | 1.75 | 3.00 | 4.75 | 6.75 | 8.50 |
| CIT.Y | Yugoslavian Citizen | 4.56 | 0.26 | 2.53 | 1.25 | 2.75 | 4.00 | 6.25 | 7.61 |
| CIT.T | Turkish citizen | 4.49 | 0.48 | 3.41 | 0.00 | 2.25 | 3.75 | 7.75 | 8.75 |
| C2.D | D:children in HH aged up to 2 | 5.28 | 0.10 | 2.40 | 2.25 | 3.75 | 5.25 | 7.00 | 8.25 |
| C2_3.D | D:children in HH aged 2-3y | 5.21 | 0.12 | 2.48 | 2.00 | 3.50 | 5.25 | 7.00 | 8.25 |
| C4_6.D | D:children in HH aged 4-6y | 5.35 | 0.10 | 2.42 | 2.00 | 3.50 | 5.50 | 7.00 | 8.50 |
| C7_10.D | D:children in HH aged 7-10y | 5.53 | 0.10 | 2.69 | 2.00 | 3.50 | 5.75 | 7.25 | 9.00 |
| C11_15.D | D:children in HH aged 11-15y | 5.96 | 0.10 | 2.85 | 2.25 | 3.75 | 6.00 | 8.00 | 10.00 |
| C7_15.D | D:children in HH aged 7-15y | 5.69 | 0.08 | 2.77 | 2.00 | 3.50 | 5.75 | 7.75 | 9.50 |
| C16-18.D | D:children in HH aged 16-18y | 6.25 | 0.12 | 2.84 | 2.75 | 4.25 | 6.01 | 8.25 | 10.25 |
| C16_20.D | D:children in HH aged 16-20y | 6.12 | 0.10 | 2.88 | 2.50 | 4.00 | 6.00 | 8.25 | 10.00 |
| C21_27.D | D:children in HH aged 21-27y | 6.23 | 0.11 | 2.89 | 2.50 | 4.00 | 6.25 | 8.25 | 10.00 |
| ICC | At least one child not in ICC | 5.47 | 0.08 | 2.64 | 2.25 | 3.50 | 5.50 | 7.25 | 8.75 |
| ICC.FT | (All) child(ren) in fulltime ICC | 4.20 | 0.26 | 2.48 | 1.50 | 2.00 | 3.75 | 5.50 | 7.42 |
| ICC.PT | (At least one) child in parttime ICC | 5.21 | 0.18 | 2.57 | 1.75 | 3.25 | 5.50 | 6.75 | 8.25 |
| ALL | | 5.42 | 0.04 | 2.73 | 2.00 | 3.50 | 5.25 | 7.25 | 9.00 |

Appendix - Table 17: Home Production by Covariates; MALES

| Covariate | Description | Mean | SE | StdDev | P 10 | P 25 | P 50 | P 75 | P 90 |
|------------|---------------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| AGE | Age (10-years steps) | | | | | | | | |
| | 20 - 29 | 1.34 | 0.08 | 1.98 | 0.00 | 0.00 | 0.50 | 2.00 | 3.75 |
| | 30 - 39 | 1.48 | 0.06 | 2.13 | 0.00 | 0.00 | 0.50 | 2.00 | 4.25 |
| | 40 - 49 | 1.71 | 0.07 | 2.25 | 0.00 | 0.00 | 0.75 | 2.75 | 4.50 |
| | 50 - 59 | 1.84 | 0.07 | 2.33 | 0.00 | 0.00 | 1.00 | 3.00 | 5.25 |
| | 60 - 69 | 2.97 | 0.10 | 2.66 | 0.00 | 0.50 | 2.50 | 5.00 | 6.95 |
| | 70 - 79 | 2.51 | 0.12 | 2.31 | 0.00 | 0.50 | 2.00 | 4.25 | 5.94 |
| | 80 - 89 | 1.97 | 0.20 | 2.17 | 0.00 | 0.00 | 1.25 | 3.54 | 5.25 |
| ED | Education Level | | | | | | | | |
| | no education level received [D] | 1.87 | 0.03 | 2.33 | 0.00 | 0.00 | 1.00 | 3.00 | 5.25 |
| | compulsory level (Pflichtschule) | 1.91 | 0.07 | 2.38 | 0.00 | 0.00 | 1.00 | 3.00 | 5.50 |
| | apprenticeship (Lehrabschluss) | 1.89 | 0.05 | 2.32 | 0.00 | 0.00 | 1.00 | 3.00 | 5.25 |
| | vocational school (BMS) | 1.89 | 0.13 | 2.58 | 0.00 | 0.00 | 0.75 | 2.59 | 6.00 |
| | A-grade (AHS-Matura) | 1.97 | 0.12 | 1.85 | 0.00 | 0.25 | 1.50 | 3.75 | 4.50 |
| | A-grade (BHS-Matura) | 1.78 | 0.12 | 2.43 | 0.00 | 0.00 | 0.75 | 2.83 | 4.92 |
| | A-Grade | 1.85 | 0.09 | 2.23 | 0.00 | 0.00 | 1.00 | 3.00 | 4.50 |
| | University degree (Uni-Abschluss) | 1.61 | 0.11 | 2.02 | 0.00 | 0.00 | 1.00 | 2.25 | 4.25 |
| SEMPLS | Self employed [D] | 1.51 | 0.09 | 2.35 | 0.00 | 0.00 | 0.25 | 2.25 | 4.90 |
| MEMPLS | medium professional status [D] | 1.83 | 0.04 | 2.22 | 0.00 | 0.00 | 1.00 | 2.75 | 5.00 |
| HEMPLS | high professional status [D] | 1.93 | 0.12 | 2.35 | 0.00 | 0.00 | 1.00 | 3.25 | 5.00 |
| ED.HIGHA | person has significantly higher education compared to partner | 2.09 | 0.11 | 2.64 | 0.00 | 0.00 | 1.00 | 3.50 | 5.92 |
| ED.LOWER | person has significantly lower education compared to partner | 2.09 | 0.12 | 2.22 | 0.00 | 0.25 | 1.50 | 3.00 | 5.00 |
| P.SEMPLS | Partner is self employed | 1.68 | 0.10 | 2.49 | 0.00 | 0.00 | 0.46 | 2.50 | 5.50 |
| P.MEMPLS | Partner has medium prof.status | 1.81 | 0.05 | 2.16 | 0.00 | 0.00 | 1.00 | 2.75 | 4.75 |
| P.HEMPLS | Partner has high prof.status | 1.47 | 0.21 | 1.62 | 0.00 | 0.04 | 1.07 | 2.50 | 4.00 |
| P.CIT.Y | Partner is Yugoslavian citizen | 1.38 | 0.20 | 2.11 | 0.00 | 0.00 | 0.25 | 2.00 | 4.43 |
| P.CIT.T | Partner is Turkish citizen | 0.44 | 0.11 | 0.85 | 0.00 | 0.00 | 0.00 | 0.25 | 2.00 |
| HOMEOWN | Is HH owner of dwelling? [D] | 1.97 | 0.04 | 2.44 | 0.00 | 0.00 | 1.00 | 3.00 | 5.50 |
| HOME2OWN | Has HH second dwelling? [D] | 2.10 | 0.11 | 2.41 | 0.00 | 0.00 | 1.25 | 3.25 | 6.00 |
| CAROWN | Does HH own a car? [D] | 1.87 | 0.04 | 2.36 | 0.00 | 0.00 | 1.00 | 2.75 | 5.25 |
| CAR2OWN | Does HH own a second car? [D] | 1.90 | 0.06 | 2.50 | 0.00 | 0.00 | 1.00 | 2.75 | 5.75 |
| DISABLED | | | | | | | | | |
| | Disabled? - no disabled person in HH | 1.87 | 0.03 | 2.29 | 0.00 | 0.00 | 1.00 | 3.00 | 5.25 |
| | Disabled? - temporary help needed | 2.39 | 0.27 | 3.31 | 0.00 | 0.00 | 0.50 | 3.68 | 9.15 |
| | Disabled? - permanent help needed | 1.69 | 0.18 | 2.31 | 0.00 | 0.00 | 0.25 | 3.25 | 4.50 |
| | Disabled? - bounded to bed | 1.57 | 0.24 | 1.98 | 0.00 | 0.00 | 0.27 | 3.25 | 4.37 |
| PHHELP.H | HH receives paid help for HP & CC | 1.44 | 0.14 | 2.02 | 0.00 | 0.00 | 0.41 | 2.25 | 4.15 |
| UHHELP.H | HH receives unpaid help for HP & CC | 1.75 | 0.12 | 2.25 | 0.00 | 0.00 | 1.00 | 2.50 | 5.50 |
| GHELP.H | HH gives HP&CC-help to other HH | 2.18 | 0.09 | 2.31 | 0.00 | 0.00 | 1.50 | 3.50 | 5.68 |
| HELP.P | Person gives HP&CC-help to other HH | 2.17 | 0.15 | 2.29 | 0.00 | 0.00 | 1.56 | 3.49 | 5.75 |
| CITY | City [D] | 1.89 | 0.05 | 2.23 | 0.00 | 0.00 | 1.00 | 3.00 | 5.00 |
| LANDSIDE | Landside [D] | 1.92 | 0.08 | 2.35 | 0.00 | 0.00 | 1.00 | 3.00 | 5.41 |
| WESTERN | Western Area (V,T,Sbg) | 1.84 | 0.06 | 2.24 | 0.00 | 0.00 | 1.00 | 3.00 | 4.86 |
| CIT.Y | Yugoslavian Citizen | 1.47 | 0.17 | 1.93 | 0.00 | 0.00 | 1.00 | 2.00 | 4.50 |
| CIT.T | Turkish citizen | 0.52 | 0.12 | 0.91 | 0.00 | 0.00 | 0.00 | 0.84 | 2.04 |
| C2.D | D:children in HH aged up to 2 | 1.36 | 0.08 | 2.05 | 0.00 | 0.00 | 0.50 | 2.00 | 4.25 |
| C2_3.D | D:children in HH aged 2-3y | 1.24 | 0.08 | 1.89 | 0.00 | 0.00 | 0.25 | 1.81 | 3.75 |
| C4_6.D | D:children in HH aged 4-6y | 1.44 | 0.08 | 2.06 | 0.00 | 0.00 | 0.50 | 2.25 | 4.50 |
| C7_10.D | D:children in HH aged 7-10y | 1.56 | 0.07 | 2.28 | 0.00 | 0.00 | 0.50 | 2.25 | 4.50 |
| C11_15.D | D:children in HH aged 11-15y | 1.79 | 0.08 | 2.51 | 0.00 | 0.00 | 0.75 | 2.75 | 5.06 |
| C7_15.D | D:children in HH aged 7-15y | 1.68 | 0.06 | 2.35 | 0.00 | 0.00 | 0.75 | 2.50 | 4.50 |
| C16-18.D | D:children in HH aged 16-18y | 1.63 | 0.09 | 2.27 | 0.00 | 0.00 | 0.50 | 2.75 | 4.75 |
| C16_20.D | D:children in HH aged 16-20y | 1.61 | 0.07 | 2.21 | 0.00 | 0.00 | 0.75 | 2.50 | 4.50 |
| C21_27.D | D:children in HH aged 21-27y | 1.94 | 0.08 | 2.40 | 0.00 | 0.00 | 1.00 | 3.25 | 5.50 |
| ICC | At least one child not in ICC | 1.74 | 0.07 | 2.48 | 0.00 | 0.00 | 0.75 | 2.50 | 5.00 |
| ICC.FT | (All) child(ren) in fulltime ICC | 1.69 | 0.18 | 1.87 | 0.00 | 0.00 | 1.17 | 2.64 | 4.00 |
| ICC.PT | (At least one) child in parttime ICC | 1.50 | 0.13 | 1.96 | 0.00 | 0.00 | 0.50 | 2.50 | 4.50 |
| ALL | | 1.87 | 0.03 | 2.33 | 0.00 | 0.00 | 1.00 | 3.00 | 5.25 |

A.2.4 Child and Elder Care

Appendix - Table 18: OLS on Child and Elder Care; FEMALES

| | Estimate | Std. Error | t value | Pr(> t) | |
|---------------------------------------------------------------|------------|------------|---------|----------|-----|
| (Intercept) | 2.2985970 | 0.2353968 | 9.765 | < 2e-16 | *** |
| WEEKEND | -0.2700893 | 0.0423512 | -6.377 | 1.95e-10 | *** |
| AGE | -0.0539923 | 0.0097383 | -5.544 | 3.09e-08 | *** |
| I (AGE^2) | 0.0003597 | 0.0001052 | 3.419 | 0.000632 | *** |
| ED.APP | -0.0379643 | 0.0448411 | -0.847 | 0.397233 | |
| ED.VOC | 0.1312167 | 0.0577165 | 2.273 | 0.023036 | * |
| ED.MAT | 0.0694379 | 0.0835273 | 0.831 | 0.405829 | |
| ED.UNI | 0.4425055 | 0.1127020 | 3.926 | 8.73e-05 | *** |
| SEMPLS | -0.1336116 | 0.0582551 | -2.294 | 0.021853 | * |
| HEMPLS | -0.0884245 | 0.1943884 | -0.455 | 0.649209 | |
| P.AGEDIF | -0.0054983 | 0.0036267 | -1.516 | 0.129566 | |
| ED.HIGHA | -0.1970654 | 0.0918539 | -2.145 | 0.031963 | * |
| P.SEMPLS | -0.0237410 | 0.0623006 | -0.381 | 0.703164 | |
| P.MEMPLS | 0.0666900 | 0.0426642 | 1.563 | 0.118078 | |
| P.HEMPLS | 0.0456293 | 0.0829464 | 0.550 | 0.582269 | |
| P.CIT.Y | -0.2465323 | 0.3946982 | -0.625 | 0.532253 | |
| P.CIT.T | -1.4184213 | 0.7423260 | -1.911 | 0.056085 | . |
| HOMEOWN | 0.0976582 | 0.0505407 | 1.932 | 0.053377 | . |
| HOMESIZE | 0.0001181 | 0.0005211 | 0.227 | 0.820631 | |
| HOME2OWN | -0.0706218 | 0.0642456 | -1.099 | 0.271709 | |
| CAROWN | 0.0439106 | 0.0468725 | 0.937 | 0.348897 | |
| CAR2OWN | -0.0799592 | 0.0444068 | -1.801 | 0.071819 | . |
| DISAPERS | 0.1859134 | 0.0345933 | 5.374 | 8.01e-08 | *** |
| PHELP.H | 0.0978269 | 0.1008481 | 0.970 | 0.332068 | |
| UHELP.H | -0.0366164 | 0.0698385 | -0.524 | 0.600090 | |
| CITY | 0.0416970 | 0.0660108 | 0.632 | 0.527629 | |
| LANDSIDE | -0.0153191 | 0.0671085 | -0.228 | 0.819442 | |
| WESTERN | -0.0504866 | 0.0432625 | -1.167 | 0.243267 | |
| CIT.Y | -0.0481896 | 0.3979300 | -0.121 | 0.903616 | |
| CIT.T | 1.4846095 | 0.7519063 | 1.974 | 0.048379 | * |
| C2.D | 1.8255821 | 0.0689089 | 26.493 | < 2e-16 | *** |
| C2_3.D | 0.5683390 | 0.0758507 | 7.493 | 7.80e-14 | *** |
| C4_6.D | 0.8875443 | 0.0604522 | 14.682 | < 2e-16 | *** |
| C7_10.D | 0.5268143 | 0.0499114 | 10.555 | < 2e-16 | *** |
| C11_15.D | -0.0450900 | 0.0465343 | -0.969 | 0.332606 | |
| C16_20.D | -0.0621354 | 0.0469785 | -1.323 | 0.186012 | |
| C21_27.D | -0.1015146 | 0.0529172 | -1.918 | 0.055116 | . |
| ICC.FT | -0.0781108 | 0.1496357 | -0.522 | 0.601687 | |
| ICC.PT | 0.1925041 | 0.0966899 | 1.991 | 0.046536 | * |
| in.working.ageTRUE | -0.1442554 | 0.0809288 | -1.782 | 0.074723 | . |
| HWAGE2 | -0.0010634 | 0.0008241 | -1.290 | 0.196957 | |
| --- | | | | | |
| Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1 | | | | | |

Residual standard error: 1.275 on 5522 degrees of freedom
 (20 observations deleted due to missingness)
 Multiple R-Squared: 0.3891, Adjusted R-squared: 0.3846
 F-statistic: 87.91 on 40 and 5522 DF, p-value: < 2.2e-16

Appendix - Table 19: OLS on Child and Elder Care; MALES

| | Estimate | Std. Error | t value | Pr(> t) | |
|--------------------|------------|------------|---------|----------|-----|
| (Intercept) | 7.723e-01 | 1.809e-01 | 4.268 | 2.00e-05 | *** |
| WEEKEND | 1.326e-01 | 3.190e-02 | 4.158 | 3.25e-05 | *** |
| AGE | -1.811e-02 | 7.547e-03 | -2.400 | 0.01645 | * |
| I (AGE^2) | 1.705e-04 | 7.735e-05 | 2.205 | 0.02752 | * |
| ED.APP | -2.496e-02 | 3.264e-02 | -0.765 | 0.44439 | |
| ED.VOC | 8.941e-03 | 5.742e-02 | 0.156 | 0.87627 | |
| ED.MAT | -2.235e-02 | 6.464e-02 | -0.346 | 0.72949 | |
| ED.UNI | 4.047e-02 | 8.004e-02 | 0.506 | 0.61311 | |
| SEMPLS | -4.719e-02 | 4.267e-02 | -1.106 | 0.26877 | |
| HEMPLS | -1.333e-01 | 6.238e-02 | -2.138 | 0.03259 | * |
| P.AGEDIF | -2.068e-03 | 2.807e-03 | -0.737 | 0.46138 | |
| ED.HIGHA | 3.129e-02 | 5.683e-02 | 0.551 | 0.58193 | |
| P.SEMPLS | 1.022e-01 | 4.535e-02 | 2.253 | 0.02427 | * |
| P.MEMPLS | 8.220e-03 | 3.169e-02 | 0.259 | 0.79535 | |
| P.HEMPLS | 1.104e-01 | 1.465e-01 | 0.753 | 0.45129 | |
| P.CIT.Y | -5.258e-01 | 2.994e-01 | -1.756 | 0.07910 | . |
| P.CIT.T | 2.629e-01 | 5.670e-01 | 0.464 | 0.64285 | |
| HOMEOWN | -8.594e-02 | 3.802e-02 | -2.260 | 0.02384 | * |
| HOMESIZE | 5.649e-04 | 3.926e-04 | 1.439 | 0.15026 | |
| HOME2OWN | -7.776e-02 | 4.838e-02 | -1.607 | 0.10807 | |
| CAROWN | 2.558e-02 | 3.538e-02 | 0.723 | 0.46977 | |
| CAR2OWN | -9.192e-03 | 3.347e-02 | -0.275 | 0.78360 | |
| DISAPERS | -5.136e-02 | 2.614e-02 | -1.965 | 0.04944 | * |
| PHELP.H | 3.823e-02 | 7.644e-02 | 0.500 | 0.61702 | |
| UHELP.H | 3.315e-02 | 5.255e-02 | 0.631 | 0.52820 | |
| CITY | 7.801e-02 | 4.952e-02 | 1.576 | 0.11520 | |
| LANDSIDE | -9.704e-02 | 5.050e-02 | -1.921 | 0.05472 | . |
| WESTERN | -8.487e-02 | 3.257e-02 | -2.606 | 0.00919 | ** |
| CIT.Y | 4.874e-01 | 2.971e-01 | 1.641 | 0.10090 | |
| CIT.T | -1.991e-01 | 5.596e-01 | -0.356 | 0.72196 | |
| C2.D | 4.361e-01 | 5.159e-02 | 8.454 | < 2e-16 | *** |
| C2_3.D | 3.028e-01 | 5.721e-02 | 5.293 | 1.25e-07 | *** |
| C4_6.D | 1.874e-01 | 4.555e-02 | 4.113 | 3.96e-05 | *** |
| C7_10.D | 8.851e-02 | 3.765e-02 | 2.351 | 0.01876 | * |
| C11_15.D | -5.496e-02 | 3.515e-02 | -1.564 | 0.11798 | |
| C16_20.D | -1.082e-02 | 3.530e-02 | -0.306 | 0.75927 | |
| C21_27.D | -9.338e-02 | 3.923e-02 | -2.381 | 0.01732 | * |
| ICC.FT | 2.366e-01 | 1.125e-01 | 2.103 | 0.03547 | * |
| ICC.PT | 3.751e-02 | 7.286e-02 | 0.515 | 0.60672 | |
| in.working.ageTRUE | -1.011e-01 | 6.207e-02 | -1.628 | 0.10360 | |
| HWAGE2 | -1.754e-04 | 4.470e-04 | -0.392 | 0.69477 | |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

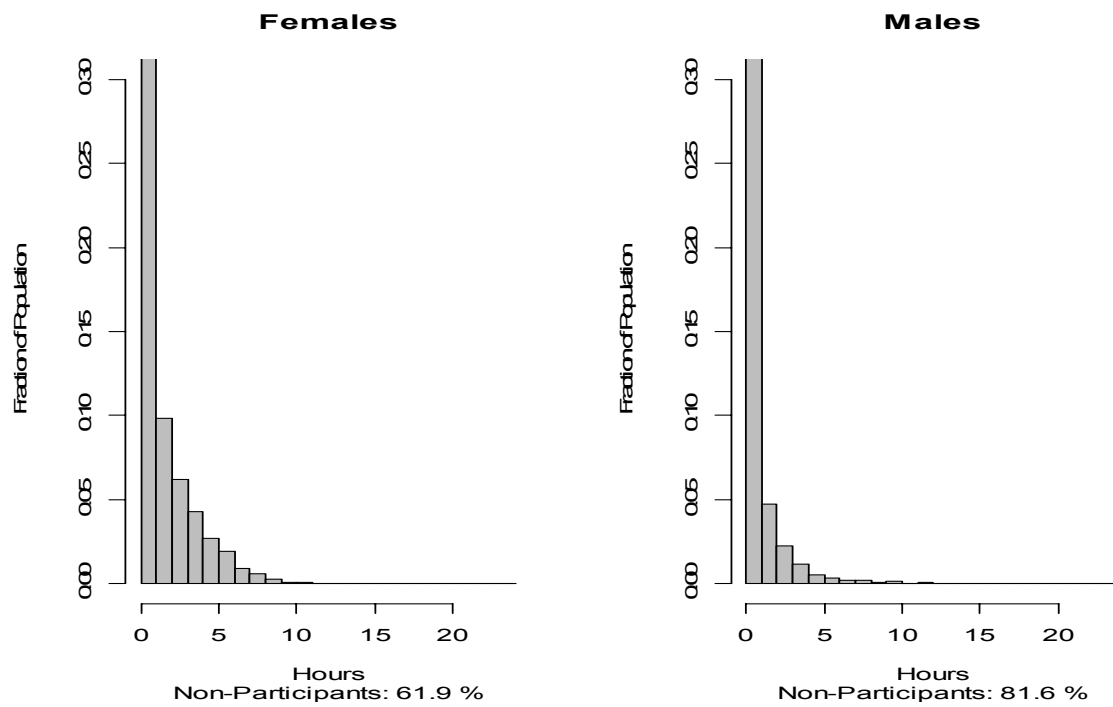
Residual standard error: 0.9604 on 5522 degrees of freedom

(18 observations deleted due to missingness)

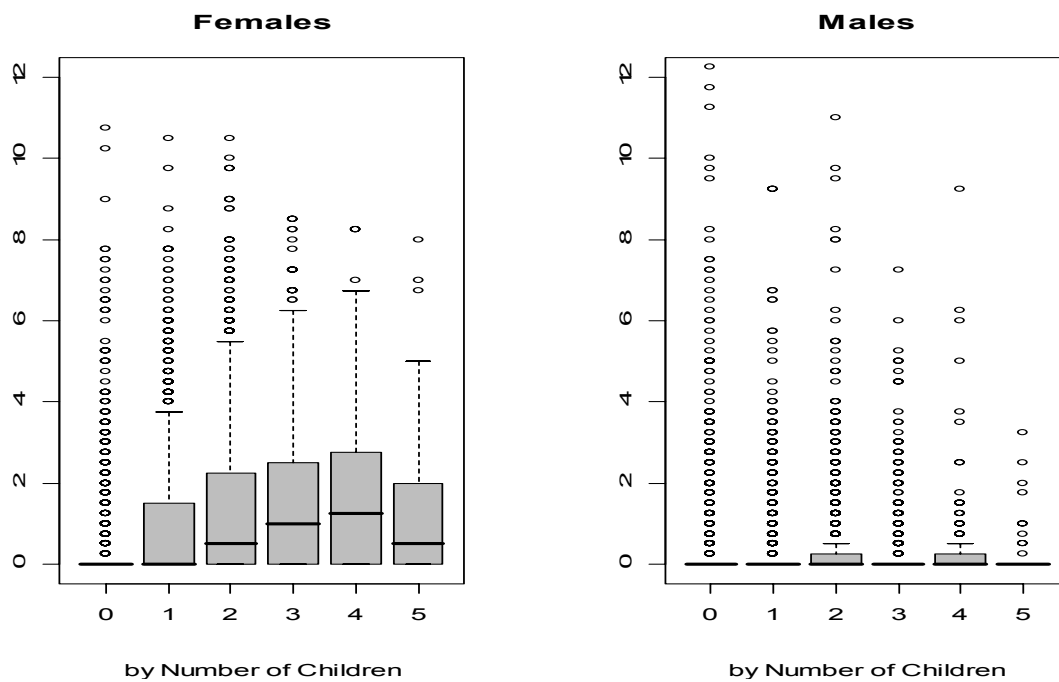
Multiple R-Squared: 0.07228, Adjusted R-squared: 0.06556

F-statistic: 10.75 on 40 and 5522 DF, p-value: < 2.2e-16

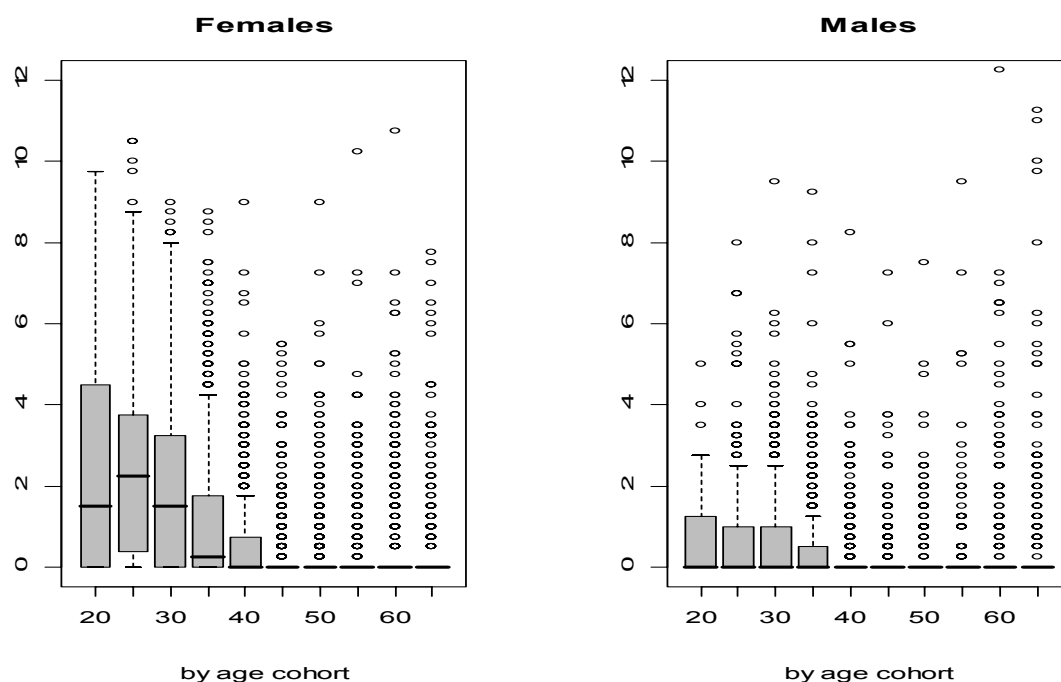
Appendix - Figure 11: Intensity-Distribution of Child and Elder Care



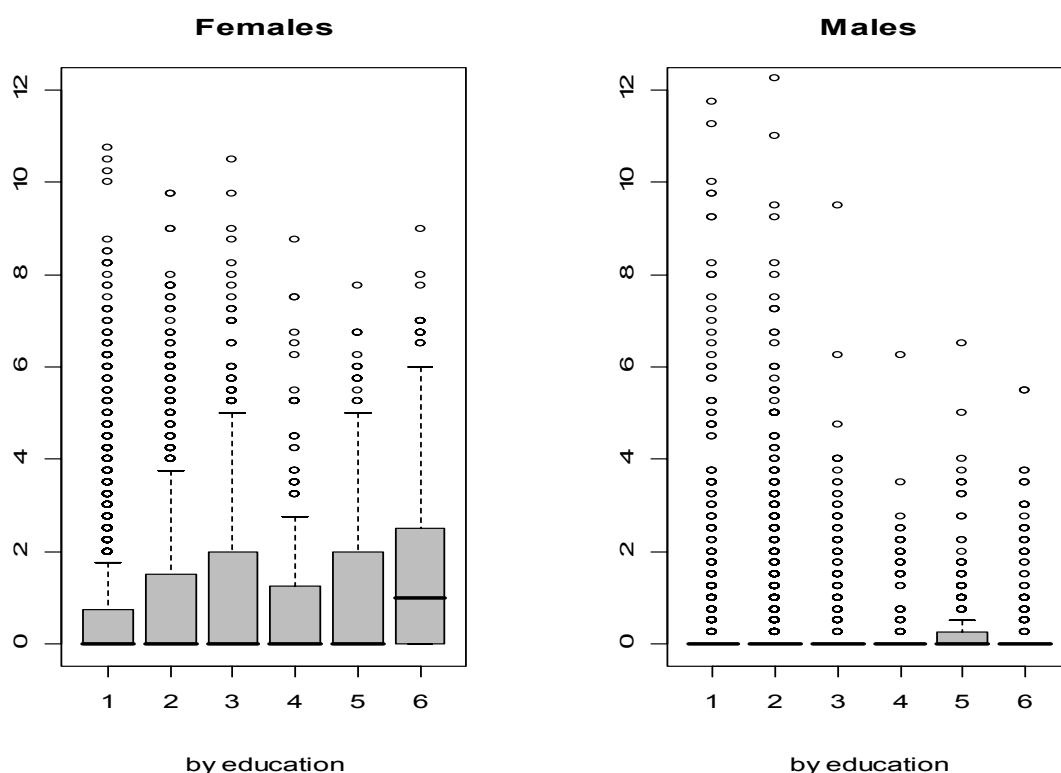
Appendix - Figure 12: Child and Elder Care by Number of Children



Appendix - Figure 13: Child and Elder Care by Age Cohort



Appendix - Figure 14: Child and Elder Care by Education⁴⁹



⁴⁹ scale: 1: Compulsory level
2: Apprenticeship
3: Vocational level
4: A-grade

5: A-grade (tech & comm)

6: Academic level

Appendix - Table 20: Child and Elder Care by Covariates; FEMALES

| Covariate | Description | Mean | SE | StdDev | P 10 | P 25 | P 50 | P 75 | P 90 |
|------------|---------------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| AGE | Age (10-years steps) | | | | | | | | |
| | 20 - 29 | 2.21 | 0.08 | 2.29 | 0.00 | 0.00 | 1.75 | 3.75 | 5.50 |
| | 30 - 39 | 1.51 | 0.05 | 1.82 | 0.00 | 0.00 | 0.75 | 2.50 | 4.25 |
| | 40 - 49 | 0.41 | 0.03 | 0.94 | 0.00 | 0.00 | 0.00 | 0.25 | 1.50 |
| | 50 - 59 | 0.36 | 0.03 | 0.99 | 0.00 | 0.00 | 0.00 | 0.00 | 1.25 |
| | 60 - 69 | 0.37 | 0.05 | 1.16 | 0.00 | 0.00 | 0.00 | 0.00 | 1.30 |
| | 70 - 79 | 0.26 | 0.06 | 0.88 | 0.00 | 0.00 | 0.00 | 0.00 | 0.79 |
| | 80 - 89 | 0.15 | 0.10 | 0.77 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| ED | Education Level | | | | | | | | |
| | no education level received [D] | 0.96 | 0.02 | 1.69 | 0.00 | 0.00 | 0.00 | 1.50 | 3.50 |
| | compulsory level (Pflichtschule) | 0.76 | 0.03 | 1.52 | 0.00 | 0.00 | 0.00 | 0.75 | 2.93 |
| | apprenticeship (Lehrabschluss) | 1.01 | 0.05 | 1.67 | 0.00 | 0.00 | 0.00 | 1.50 | 3.50 |
| | vocational school (BMS) | 1.10 | 0.07 | 1.85 | 0.00 | 0.00 | 0.00 | 1.75 | 4.00 |
| | A-grade (AHS-Matura) | 1.14 | 0.14 | 1.94 | 0.00 | 0.00 | 0.00 | 1.50 | 4.50 |
| | A-grade (BHS-Matura) | 1.38 | 0.13 | 1.87 | 0.00 | 0.00 | 0.25 | 2.25 | 4.25 |
| | A-Grade | 1.27 | 0.09 | 1.91 | 0.00 | 0.00 | 0.00 | 2.00 | 4.50 |
| | University degree (Uni-Abschluss) | 1.66 | 0.14 | 2.07 | 0.00 | 0.00 | 1.00 | 2.50 | 5.48 |
| SEMPLS | Self employed [D] | 0.74 | 0.06 | 1.50 | 0.00 | 0.00 | 0.00 | 1.00 | 2.50 |
| MEMPLS | medium professional status [D] | 1.18 | 0.04 | 1.83 | 0.00 | 0.00 | 0.00 | 2.00 | 4.00 |
| HEMPLS | high professional status [D] | 1.23 | 0.26 | 1.92 | 0.00 | 0.00 | 0.00 | 2.13 | 5.00 |
| ED.HIGHA | person has significantly higher education compared to partner | 1.22 | 0.11 | 1.82 | 0.00 | 0.00 | 0.00 | 2.00 | 3.75 |
| ED.LOWER | person has significantly lower education compared to partner | 0.95 | 0.08 | 1.83 | 0.00 | 0.00 | 0.00 | 1.25 | 3.67 |
| P.SEMPLS | Partner is self employed | 0.81 | 0.06 | 1.57 | 0.00 | 0.00 | 0.00 | 1.00 | 2.75 |
| P.MEMPLS | Partner has medium prof.status | 1.11 | 0.04 | 1.78 | 0.00 | 0.00 | 0.00 | 1.75 | 3.75 |
| P.HEMPLS | Partner has high prof.status | 1.10 | 0.10 | 1.84 | 0.00 | 0.00 | 0.00 | 1.50 | 4.50 |
| P.CIT.Y | Partner is Yugoslavian citizen | 0.80 | 0.12 | 1.28 | 0.00 | 0.00 | 0.00 | 1.50 | 2.75 |
| P.CIT.T | Partner is Turkish citizen | 1.15 | 0.26 | 1.84 | 0.00 | 0.00 | 0.20 | 1.75 | 4.69 |
| HOMEOWN | Is HH owner of dwelling? [D] | 0.96 | 0.03 | 1.70 | 0.00 | 0.00 | 0.00 | 1.25 | 3.25 |
| HOME2OWN | Has HH second dwelling? [D] | 0.59 | 0.07 | 1.39 | 0.00 | 0.00 | 0.00 | 0.25 | 2.25 |
| CAROWN | Does HH own a car? [D] | 1.02 | 0.03 | 1.74 | 0.00 | 0.00 | 0.00 | 1.50 | 3.50 |
| CAR2OWN | Does HH own a second car? [D] | 0.86 | 0.05 | 1.64 | 0.00 | 0.00 | 0.00 | 1.00 | 3.00 |
| DISABLED | | | | | | | | | |
| | Disabled? - no disabled person in HH | 0.96 | 0.03 | 1.69 | 0.00 | 0.00 | 0.00 | 1.50 | 3.50 |
| | Disabled? - temporary help needed | 0.64 | 0.11 | 1.35 | 0.00 | 0.00 | 0.00 | 0.50 | 2.75 |
| | Disabled? - permanent help needed | 0.83 | 0.14 | 1.73 | 0.00 | 0.00 | 0.00 | 0.95 | 2.92 |
| | Disabled? - bounded to bed | 1.93 | 0.27 | 2.14 | 0.00 | 0.00 | 1.50 | 2.75 | 5.03 |
| PHELP.H | HH receives paid help for HP & CC | 1.14 | 0.14 | 1.92 | 0.00 | 0.00 | 0.00 | 1.85 | 3.25 |
| UHELP.H | HH receives unpaid help for HP & CC | 1.53 | 0.10 | 1.90 | 0.00 | 0.00 | 0.75 | 2.57 | 3.75 |
| GHELP.H | HH gives HP&CC-help to other HH | 0.94 | 0.07 | 1.59 | 0.00 | 0.00 | 0.00 | 1.50 | 3.25 |
| HELP.P | Person gives HP&CC-help to other HH | 0.92 | 0.08 | 1.60 | 0.00 | 0.00 | 0.00 | 1.25 | 3.25 |
| CITY | City [D] | 0.91 | 0.04 | 1.67 | 0.00 | 0.00 | 0.00 | 1.25 | 3.50 |
| LANDSIDE | Landside [D] | 0.96 | 0.06 | 1.67 | 0.00 | 0.00 | 0.00 | 1.50 | 3.50 |
| WESTERN | Western Area (V,T,Sbg) | 0.89 | 0.04 | 1.65 | 0.00 | 0.00 | 0.00 | 1.25 | 3.25 |
| CIT.Y | Yugoslavian Citizen | 0.89 | 0.14 | 1.37 | 0.00 | 0.00 | 0.00 | 1.50 | 2.75 |
| CIT.T | Turkish citizen | 1.21 | 0.26 | 1.86 | 0.00 | 0.00 | 0.24 | 1.75 | 4.70 |
| C2.D | D:children in HH aged up to 2 | 3.19 | 0.09 | 2.26 | 0.00 | 1.50 | 3.00 | 4.50 | 6.00 |
| C2_3.D | D:children in HH aged 2-3y | 2.80 | 0.10 | 2.06 | 0.00 | 1.25 | 2.50 | 4.25 | 5.75 |
| C4_6.D | D:children in HH aged 4-6y | 2.32 | 0.08 | 2.00 | 0.00 | 0.75 | 1.75 | 3.50 | 5.25 |
| C7_10.D | D:children in HH aged 7-10y | 1.67 | 0.06 | 1.73 | 0.00 | 0.00 | 1.25 | 2.50 | 4.25 |
| C11_15.D | D:children in HH aged 11-15y | 0.88 | 0.05 | 1.33 | 0.00 | 0.00 | 0.25 | 1.25 | 2.75 |
| C7_15.D | D:children in HH aged 7-15y | 1.26 | 0.04 | 1.62 | 0.00 | 0.00 | 0.75 | 2.00 | 3.50 |
| C16-18.D | D:children in HH aged 16-18y | 0.57 | 0.05 | 1.17 | 0.00 | 0.00 | 0.00 | 0.75 | 2.00 |
| C16_20.D | D:children in HH aged 16-20y | 0.53 | 0.04 | 1.16 | 0.00 | 0.00 | 0.00 | 0.50 | 1.75 |
| C21_27.D | D:children in HH aged 21-27y | 0.42 | 0.04 | 1.05 | 0.00 | 0.00 | 0.00 | 0.00 | 1.50 |
| ICC | At least one child not in ICC | 1.87 | 0.07 | 2.12 | 0.00 | 0.00 | 1.25 | 3.00 | 5.00 |
| ICC.FT | (All) child(ren) in fulltime ICC | 1.23 | 0.12 | 1.19 | 0.00 | 0.00 | 1.25 | 1.50 | 2.76 |
| ICC.PT | (At least one) child in parttime ICC | 2.02 | 0.14 | 1.91 | 0.00 | 0.25 | 1.50 | 3.25 | 4.75 |
| ALL | | 0.96 | 0.02 | 1.69 | 0.00 | 0.00 | 0.00 | 1.50 | 3.50 |

Appendix - Table 21: Child and Elder Care by Covariates; MALES

| Covariate | Description | Mean | SE | StdDev | P 10 | P 25 | P 50 | P 75 | P 90 |
|------------|---------------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| AGE | Age (10-years steps) | | | | | | | | |
| | 20 - 29 | 0.73 | 0.05 | 1.34 | 0.00 | 0.00 | 0.00 | 1.00 | 2.25 |
| | 30 - 39 | 0.62 | 0.03 | 1.22 | 0.00 | 0.00 | 0.00 | 0.75 | 2.00 |
| | 40 - 49 | 0.22 | 0.02 | 0.74 | 0.00 | 0.00 | 0.00 | 0.00 | 0.75 |
| | 50 - 59 | 0.15 | 0.02 | 0.72 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 60 - 69 | 0.33 | 0.05 | 1.24 | 0.00 | 0.00 | 0.00 | 0.00 | 0.75 |
| | 70 - 79 | 0.38 | 0.07 | 1.42 | 0.00 | 0.00 | 0.00 | 0.00 | 0.78 |
| | 80 - 89 | 0.30 | 0.10 | 1.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.36 |
| ED | Education Level | | | | | | | | |
| | no education level received [D] | 0.39 | 0.02 | 1.10 | 0.00 | 0.00 | 0.00 | 0.00 | 1.25 |
| | compulsory level (Pflichttschule) | 0.34 | 0.03 | 1.23 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 |
| | apprenticeship (Lehrabschluss) | 0.39 | 0.02 | 1.08 | 0.00 | 0.00 | 0.00 | 0.00 | 1.25 |
| | vocational school (BMS) | 0.40 | 0.05 | 1.02 | 0.00 | 0.00 | 0.00 | 0.00 | 1.75 |
| | A-grade (AHS-Matura) | 0.40 | 0.05 | 0.73 | 0.00 | 0.00 | 0.00 | 0.50 | 1.50 |
| | A-grade (BHS-Matura) | 0.47 | 0.05 | 1.01 | 0.00 | 0.00 | 0.00 | 0.50 | 1.50 |
| | A-Grade | 0.44 | 0.04 | 0.92 | 0.00 | 0.00 | 0.00 | 0.50 | 1.50 |
| | University degree (Uni-Abschluss) | 0.50 | 0.06 | 1.06 | 0.00 | 0.00 | 0.00 | 0.50 | 2.00 |
| SEMPLS | Self employed [D] | 0.37 | 0.05 | 1.34 | 0.00 | 0.00 | 0.00 | 0.00 | 0.89 |
| MEMPLS | medium professional status [D] | 0.43 | 0.02 | 1.08 | 0.00 | 0.00 | 0.00 | 0.00 | 1.50 |
| HEMPLS | high professional status [D] | 0.26 | 0.03 | 0.60 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 |
| ED.HIGHA | person has significantly higher education compared to partner | 0.43 | 0.04 | 1.05 | 0.00 | 0.00 | 0.00 | 0.00 | 1.50 |
| ED.LOWER | person has significantly lower education compared to partner | 0.44 | 0.07 | 1.17 | 0.00 | 0.00 | 0.00 | 0.00 | 1.94 |
| P.SEMPLS | Partner is self employed | 0.38 | 0.05 | 1.35 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 |
| P.MEMPLS | Partner has medium prof.status | 0.47 | 0.02 | 1.09 | 0.00 | 0.00 | 0.00 | 0.50 | 1.50 |
| P.HEMPLS | Partner has high prof.status | 0.46 | 0.11 | 0.89 | 0.00 | 0.00 | 0.00 | 0.66 | 2.00 |
| P.CIT.Y | Partner is Yugoslavian citizen | 0.30 | 0.06 | 0.63 | 0.00 | 0.00 | 0.00 | 0.00 | 1.25 |
| P.CIT.T | Partner is Turkish citizen | 0.34 | 0.08 | 0.61 | 0.00 | 0.00 | 0.00 | 0.50 | 1.58 |
| HOMEOWN | Is HH owner of dwelling? [D] | 0.34 | 0.02 | 1.06 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 |
| HOME2OWN | Has HH second dwelling? [D] | 0.22 | 0.03 | 0.76 | 0.00 | 0.00 | 0.00 | 0.00 | 0.75 |
| CAROWN | Does HH own a car? [D] | 0.38 | 0.02 | 1.06 | 0.00 | 0.00 | 0.00 | 0.00 | 1.25 |
| CAR2OWN | Does HH own a second car? [D] | 0.31 | 0.03 | 1.13 | 0.00 | 0.00 | 0.00 | 0.00 | 0.75 |
| DISABLED | | | | | | | | | |
| | Disabled? - no disabled person in HH | 0.40 | 0.02 | 1.12 | 0.00 | 0.00 | 0.00 | 0.00 | 1.50 |
| | Disabled? - temporary help needed | 0.22 | 0.06 | 0.72 | 0.00 | 0.00 | 0.00 | 0.00 | 0.50 |
| | Disabled? - permanent help needed | 0.18 | 0.04 | 0.54 | 0.00 | 0.00 | 0.00 | 0.00 | 0.50 |
| | Disabled? - bounded to bed | 0.51 | 0.15 | 1.27 | 0.00 | 0.00 | 0.00 | 0.00 | 2.13 |
| PHELP.H | HH receives paid help for HP & CC | 0.54 | 0.09 | 1.34 | 0.00 | 0.00 | 0.00 | 0.00 | 2.25 |
| UHELP.H | HH receives unpaid help for HP & CC | 0.59 | 0.06 | 1.14 | 0.00 | 0.00 | 0.00 | 0.64 | 2.25 |
| GHELP.H | HH gives HP& CC-help to other HH | 0.38 | 0.04 | 1.04 | 0.00 | 0.00 | 0.00 | 0.00 | 1.50 |
| HELP.P | Person gives HP& CC-help to other HH | 0.46 | 0.07 | 1.17 | 0.00 | 0.00 | 0.00 | 0.00 | 1.81 |
| CITY | City [D] | 0.43 | 0.02 | 1.08 | 0.00 | 0.00 | 0.00 | 0.00 | 1.50 |
| LANDSIDE | Landside [D] | 0.37 | 0.03 | 0.99 | 0.00 | 0.00 | 0.00 | 0.00 | 1.50 |
| WESTERN | Western Area (V,T,Sbg) | 0.40 | 0.03 | 1.05 | 0.00 | 0.00 | 0.00 | 0.00 | 1.50 |
| CIT.Y | Yugoslavian Citizen | 0.39 | 0.08 | 0.85 | 0.00 | 0.00 | 0.00 | 0.00 | 2.13 |
| CIT.T | Turkish citizen | 0.34 | 0.08 | 0.61 | 0.00 | 0.00 | 0.00 | 0.50 | 1.57 |
| C2.D | D:children in HH aged up to 2 | 1.01 | 0.06 | 1.56 | 0.00 | 0.00 | 0.25 | 1.26 | 3.25 |
| C2_3.D | D:children in HH aged 2-3y | 1.01 | 0.07 | 1.49 | 0.00 | 0.00 | 0.50 | 1.50 | 2.75 |
| C4_6.D | D:children in HH aged 4-6y | 0.77 | 0.05 | 1.32 | 0.00 | 0.00 | 0.00 | 1.00 | 2.25 |
| C7_10.D | D:children in HH aged 7-10y | 0.59 | 0.04 | 1.33 | 0.00 | 0.00 | 0.00 | 0.75 | 1.75 |
| C11_15.D | D:children in HH aged 11-15y | 0.24 | 0.02 | 0.76 | 0.00 | 0.00 | 0.00 | 0.00 | 0.75 |
| C7_15.D | D:children in HH aged 7-15y | 0.43 | 0.03 | 1.15 | 0.00 | 0.00 | 0.00 | 0.25 | 1.50 |
| C16-18.D | D:children in HH aged 16-18y | 0.22 | 0.03 | 0.79 | 0.00 | 0.00 | 0.00 | 0.00 | 0.50 |
| C16_20.D | D:children in HH aged 16-20y | 0.19 | 0.03 | 0.78 | 0.00 | 0.00 | 0.00 | 0.00 | 0.50 |
| C21_27.D | D:children in HH aged 21-27y | 0.16 | 0.03 | 0.73 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| ICC | At least one child not in ICC | 0.60 | 0.04 | 1.32 | 0.00 | 0.00 | 0.00 | 0.75 | 2.00 |
| ICC.FT | (All) child(ren) in fulltime ICC | 0.97 | 0.13 | 1.39 | 0.00 | 0.00 | 0.50 | 1.25 | 2.28 |
| ICC.PT | (At least one) child in parttime ICC | 0.72 | 0.07 | 1.11 | 0.00 | 0.00 | 0.00 | 1.00 | 2.00 |
| ALL | | 0.39 | 0.02 | 1.10 | 0.00 | 0.00 | 0.00 | 0.00 | 1.25 |

A 2.5 Active Leisure

Appendix - Table 22: OLS on Active Leisure; FEMALES

| | Estimate | Std. Error | t value | Pr(> t) | |
|--------------------|------------|------------|---------|----------|-----|
| (Intercept) | 4.0935126 | 0.4321441 | 9.473 | < 2e-16 | *** |
| WEEKEND | 2.2174926 | 0.0777489 | 28.521 | < 2e-16 | *** |
| AGE | 0.0179396 | 0.0178777 | 1.003 | 0.315680 | |
| I (AGE^2) | 0.0002209 | 0.0001931 | 1.144 | 0.252811 | |
| ED.APP | 0.0132549 | 0.0823198 | 0.161 | 0.872086 | |
| ED.VOC | -0.0996171 | 0.1059566 | -0.940 | 0.347172 | |
| ED.MAT | 0.6098215 | 0.1533403 | 3.977 | 7.07e-05 | *** |
| ED.UNI | -0.0410982 | 0.2068995 | -0.199 | 0.842553 | |
| SEMPLS | -0.6562802 | 0.1069453 | -6.137 | 9.02e-10 | *** |
| HEMPLS | 0.1054220 | 0.3568604 | 0.295 | 0.767688 | |
| P.AGEDIF | 0.0226648 | 0.0066580 | 3.404 | 0.000668 | *** |
| ED.HIGHA | 0.0193991 | 0.1686264 | 0.115 | 0.908416 | |
| P.SEMPLS | -0.2966485 | 0.1143721 | -2.594 | 0.009520 | ** |
| P.MEMPLS | 0.2005318 | 0.0783235 | 2.560 | 0.010484 | * |
| P.HEMPLS | 0.0384270 | 0.1522740 | 0.252 | 0.800776 | |
| P.CIT.Y | -0.6766184 | 0.7245913 | -0.934 | 0.350451 | |
| P.CIT.T | -0.8219272 | 1.3627705 | -0.603 | 0.546447 | |
| HOMEOWN | -0.3144754 | 0.0927832 | -3.389 | 0.000705 | *** |
| HOMESIZE | 0.0011350 | 0.0009566 | 1.187 | 0.235451 | |
| HOME2OWN | -0.0299923 | 0.1179428 | -0.254 | 0.799277 | |
| CAROWN | 0.1947689 | 0.0860491 | 2.263 | 0.023646 | * |
| CAR2OWN | -0.3000536 | 0.0815225 | -3.681 | 0.000235 | *** |
| DISAPERS | -0.1927547 | 0.0635067 | -3.035 | 0.002415 | ** |
| PHELP.H | 0.4103515 | 0.1851380 | 2.216 | 0.026700 | * |
| UHELP.H | -0.3585586 | 0.1282104 | -2.797 | 0.005182 | ** |
| CITY | -0.0144902 | 0.1211833 | -0.120 | 0.904826 | |
| LANDSIDE | 0.2639232 | 0.1231986 | 2.142 | 0.032216 | * |
| WESTERN | 0.3422165 | 0.0794217 | 4.309 | 1.67e-05 | *** |
| CIT.Y | 0.0341568 | 0.7305244 | 0.047 | 0.962709 | |
| CIT.T | 0.4412516 | 1.3803581 | 0.320 | 0.749235 | |
| C2.D | -0.2169690 | 0.1265037 | -1.715 | 0.086379 | . |
| C2_3.D | -0.2126192 | 0.1392477 | -1.527 | 0.126840 | |
| C4_6.D | -0.1250850 | 0.1109789 | -1.127 | 0.259747 | |
| C7_10.D | -0.0503957 | 0.0916280 | -0.550 | 0.582339 | |
| C11_15.D | -0.0939464 | 0.0854282 | -1.100 | 0.271506 | |
| C16_20.D | -0.2448984 | 0.0862437 | -2.840 | 0.004533 | ** |
| C21_27.D | -0.2641835 | 0.0971461 | -2.719 | 0.006560 | ** |
| ICC.FT | -0.8748838 | 0.2747030 | -3.185 | 0.001456 | ** |
| ICC.PT | 0.0833537 | 0.1775044 | 0.470 | 0.638669 | |
| in.working.ageTRUE | -0.4259841 | 0.1485701 | -2.867 | 0.004157 | ** |
| HWAGE2 | -0.0001040 | 0.0015129 | -0.069 | 0.945220 | |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 2.341 on 5522 degrees of freedom
(20 observations deleted due to missingness)
Multiple R-Squared: 0.2327, Adjusted R-squared: 0.2271
F-statistic: 41.86 on 40 and 5522 DF, p-value: < 2.2e-16

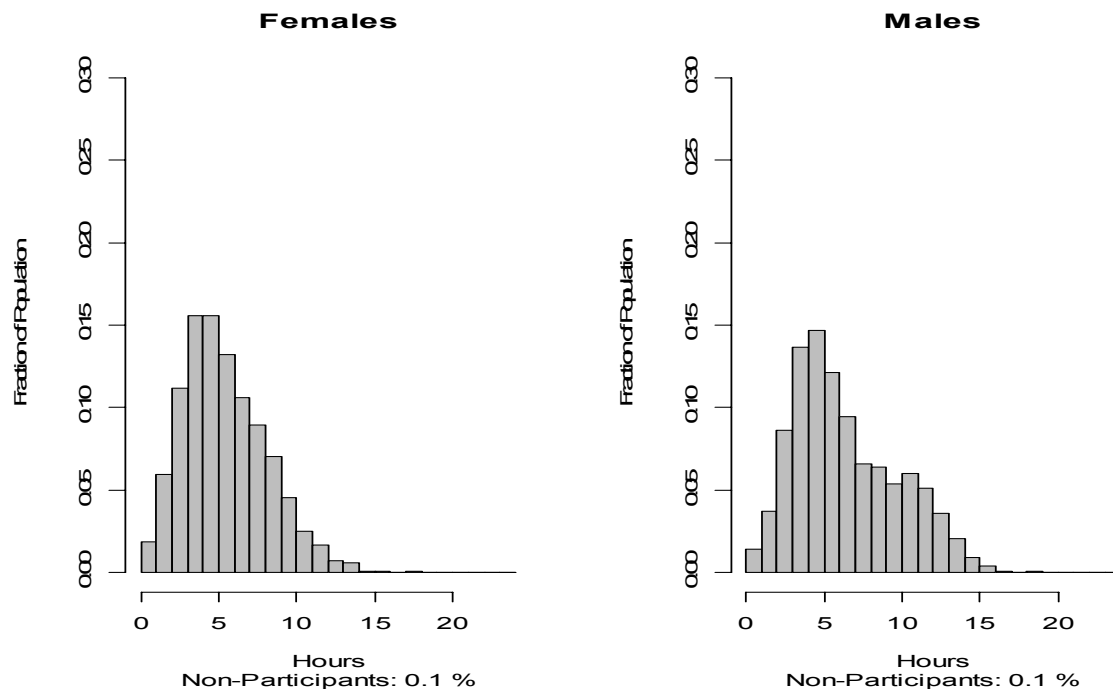
Appendix - Table 23: OLS on Active Leisure; MALES

| | Estimate | Std. Error | t value | Pr(> t) | |
|--------------------|------------|------------|---------|----------|-----|
| (Intercept) | 4.3542735 | 0.5223202 | 8.336 | < 2e-16 | *** |
| WEEKEND | 3.0556036 | 0.0920816 | 33.184 | < 2e-16 | *** |
| AGE | 0.0268172 | 0.0217859 | 1.231 | 0.21840 | . |
| I (AGE^2) | 0.0004185 | 0.0002233 | 1.874 | 0.06096 | . |
| ED.APP | 0.3076471 | 0.0942197 | 3.265 | 0.00110 | ** |
| ED.VOC | 0.3644909 | 0.1657786 | 2.199 | 0.02794 | * |
| ED.MAT | 0.3492195 | 0.1865942 | 1.872 | 0.06132 | . |
| ED.UNI | 0.6784682 | 0.2310652 | 2.936 | 0.00334 | ** |
| SEMPLS | -0.5862147 | 0.1231697 | -4.759 | 1.99e-06 | *** |
| HEMPLS | -0.2383007 | 0.1800847 | -1.323 | 0.18580 | . |
| P.AGEDIF | 0.0136749 | 0.0081029 | 1.688 | 0.09153 | . |
| ED.HIGHA | 0.0395712 | 0.1640672 | 0.241 | 0.80942 | . |
| P.SEMPLS | -0.6205996 | 0.1309068 | -4.741 | 2.18e-06 | *** |
| P.MEMPLS | -0.0122447 | 0.0914887 | -0.134 | 0.89354 | . |
| P.HEMPLS | 0.8650875 | 0.4229598 | 2.045 | 0.04087 | * |
| P.CIT.Y | 1.4527600 | 0.8643114 | 1.681 | 0.09285 | . |
| P.CIT.T | 2.0847548 | 1.6367399 | 1.274 | 0.20281 | . |
| HOMEOWN | -0.6048907 | 0.1097578 | -5.511 | 3.73e-08 | *** |
| HOMESIZE | -0.0011629 | 0.0011334 | -1.026 | 0.30494 | . |
| HOME2OWN | 0.1662855 | 0.1396681 | 1.191 | 0.23387 | . |
| CAROWN | 0.0920790 | 0.1021396 | 0.902 | 0.36736 | . |
| CAR2OWN | -0.0808557 | 0.0966254 | -0.837 | 0.40274 | . |
| DISAPERS | -0.0815894 | 0.0754539 | -1.081 | 0.27960 | . |
| PHELP.H | -0.2201839 | 0.2206797 | -0.998 | 0.31844 | . |
| UHELP.H | -0.1258385 | 0.1516927 | -0.830 | 0.40682 | . |
| CITY | 0.0006252 | 0.1429485 | 0.004 | 0.99651 | . |
| LANDSIDE | 0.2714791 | 0.1457977 | 1.862 | 0.06265 | . |
| WESTERN | -0.0172688 | 0.0940188 | -0.184 | 0.85428 | . |
| CIT.Y | -1.8077762 | 0.8575892 | -2.108 | 0.03508 | * |
| CIT.T | -1.5340230 | 1.6153671 | -0.950 | 0.34233 | . |
| C2.D | -0.3922037 | 0.1489309 | -2.633 | 0.00848 | ** |
| C2_3.D | -0.0670207 | 0.1651552 | -0.406 | 0.68490 | . |
| C4_6.D | -0.3977837 | 0.1314949 | -3.025 | 0.00250 | ** |
| C7_10.D | -0.1357237 | 0.1086877 | -1.249 | 0.21181 | . |
| C11_15.D | -0.1743436 | 0.1014677 | -1.718 | 0.08581 | . |
| C16_20.D | -0.4169026 | 0.1019152 | -4.091 | 4.36e-05 | *** |
| C21_27.D | -0.5143118 | 0.1132411 | -4.542 | 5.70e-06 | *** |
| ICC.FT | -0.5131151 | 0.3247885 | -1.580 | 0.11420 | . |
| ICC.PT | 0.3593767 | 0.2103281 | 1.709 | 0.08757 | . |
| in.working.ageTRUE | -0.4265241 | 0.1791961 | -2.380 | 0.01734 | * |
| HWAGE2 | 0.0014579 | 0.0012904 | 1.130 | 0.25859 | . |

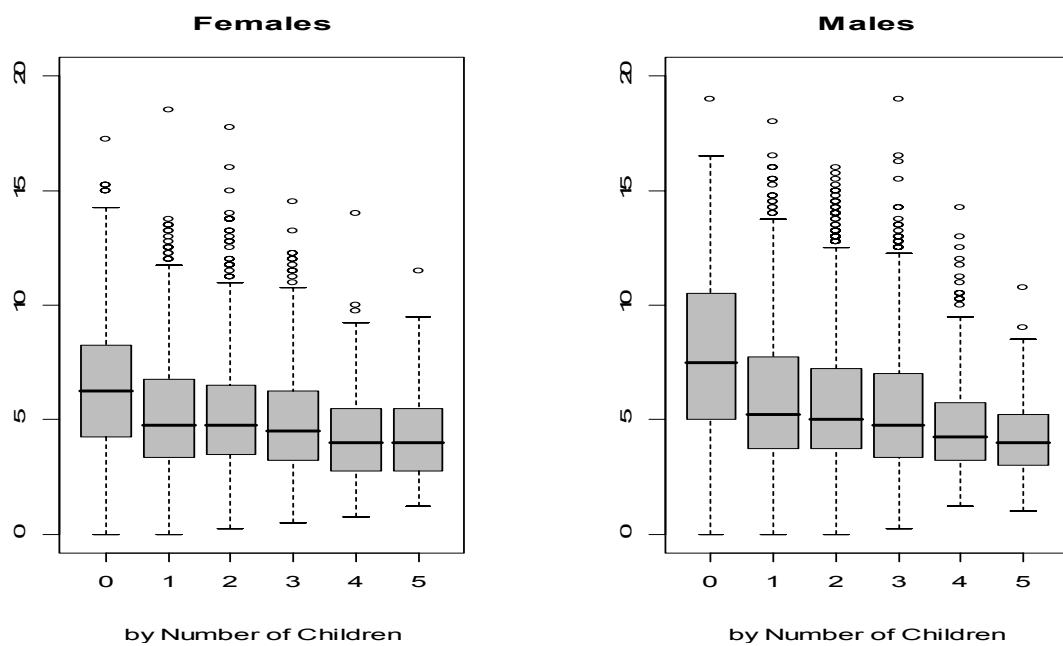
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 2.773 on 5522 degrees of freedom
(18 observations deleted due to missingness)
Multiple R-Squared: 0.3089, Adjusted R-squared: 0.3039
F-statistic: 61.7 on 40 and 5522 DF, p-value: < 2.2e-16

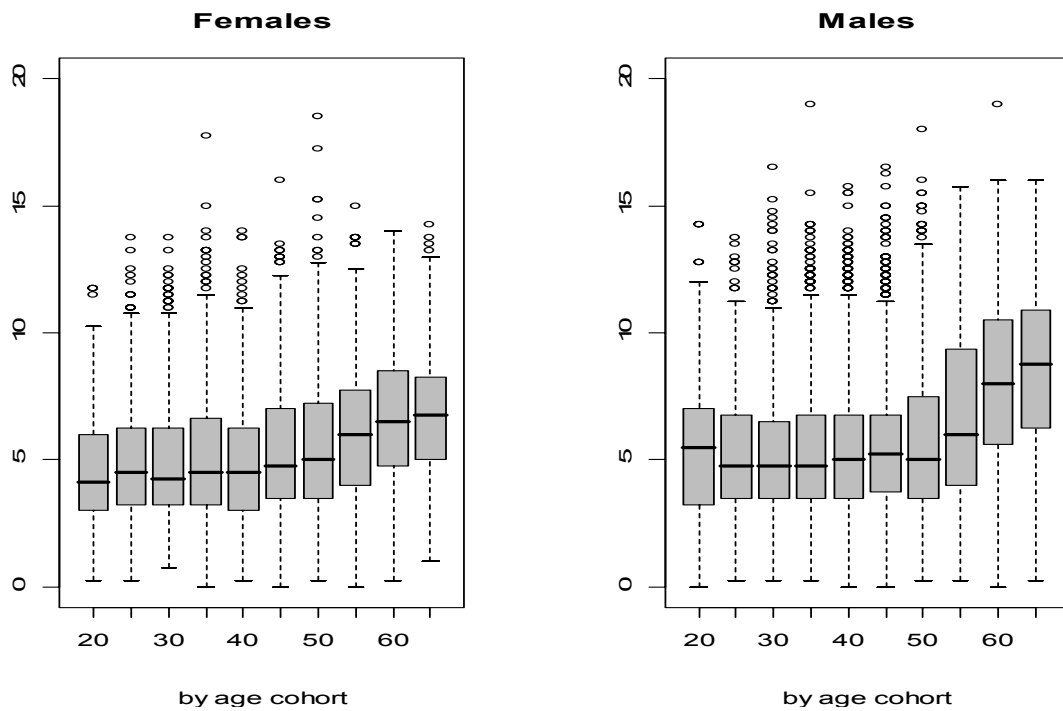
Appendix - Figure 15: Intensity-Distribution of Active Leisure



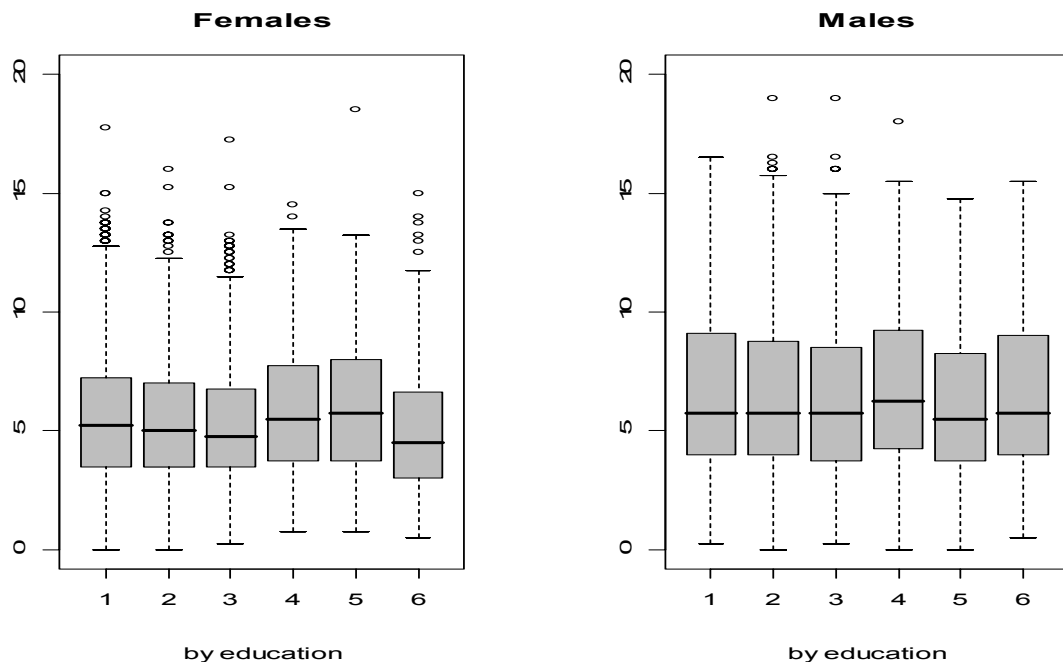
Appendix - Figure 16: Active Leisure by Number of Children



Appendix - Figure 17: Active Leisure by Age Cohort



Appendix - Figure 18: Active Leisure by Education⁵⁰



⁵⁰ scale: 1: Compulsory level 2: Apprenticeship 3: Vocational level
4: A-grade 5: A-grade (tech & comm) 6: Academic level

Appendix - Table 24: Active Leisure by Covariates; FEMALES

| Covariate | Description | Mean | SE | StdDev | P 10 | P 25 | P 50 | P 75 | P 90 |
|------------|---------------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| AGE | Age (10-years steps) | | | | | | | | |
| | 20 - 29 | 5.07 | 0.09 | 2.61 | 2.25 | 3.00 | 4.50 | 6.64 | 8.75 |
| | 30 - 39 | 4.98 | 0.08 | 2.53 | 2.00 | 3.00 | 4.50 | 6.50 | 8.50 |
| | 40 - 49 | 5.08 | 0.08 | 2.58 | 2.25 | 3.25 | 4.50 | 6.60 | 8.75 |
| | 50 - 59 | 5.80 | 0.10 | 2.80 | 2.25 | 3.75 | 5.50 | 7.50 | 9.50 |
| | 60 - 69 | 6.70 | 0.10 | 2.54 | 3.50 | 4.75 | 6.50 | 8.50 | 10.25 |
| | 70 - 79 | 7.06 | 0.14 | 2.27 | 4.50 | 5.50 | 7.00 | 8.50 | 10.00 |
| | 80 - 89 | 6.56 | 0.27 | 2.06 | 4.25 | 5.00 | 6.25 | 8.03 | 9.74 |
| ED | Education Level | | | | | | | | |
| | no education level received [D] | 5.53 | 0.04 | 2.68 | 2.25 | 3.50 | 5.25 | 7.25 | 9.25 |
| | compulsory level (Pflichtschule) | 5.54 | 0.06 | 2.60 | 2.50 | 3.50 | 5.25 | 7.25 | 9.00 |
| | apprenticeship (Lehrabschluss) | 5.50 | 0.07 | 2.59 | 2.35 | 3.50 | 5.00 | 7.25 | 9.01 |
| | vocational school (BMS) | 5.45 | 0.11 | 2.86 | 2.00 | 3.25 | 5.00 | 7.25 | 9.50 |
| | A-grade (AHS-Matura) | 6.17 | 0.22 | 3.10 | 2.75 | 3.75 | 5.75 | 8.68 | 11.00 |
| | A-grade (BHS-Matura) | 5.95 | 0.19 | 2.76 | 2.75 | 3.75 | 5.75 | 8.25 | 9.75 |
| | A-Grade | 6.06 | 0.14 | 2.93 | 2.75 | 3.75 | 5.75 | 8.25 | 10.50 |
| | University degree (Uni-Abschluss) | 4.92 | 0.19 | 2.77 | 2.00 | 2.75 | 4.50 | 6.25 | 9.25 |
| SEMPLS | Self employed [D] | 4.68 | 0.11 | 2.56 | 1.75 | 2.75 | 4.25 | 6.00 | 8.50 |
| MEMPLS | medium professional status [D] | 5.47 | 0.06 | 2.73 | 2.25 | 3.50 | 5.00 | 7.25 | 9.50 |
| HEMPLS | high professional status [D] | 5.87 | 0.45 | 3.26 | 2.50 | 3.25 | 5.00 | 8.16 | 10.75 |
| ED.HIGHA | person has significantly higher education compared to partner | 5.50 | 0.18 | 2.98 | 2.00 | 3.25 | 5.00 | 7.50 | 10.00 |
| ED.LOWER | person has significantly lower education compared to partner | 5.56 | 0.12 | 2.79 | 2.25 | 3.50 | 5.25 | 7.50 | 9.25 |
| P.SEMPLS | Partner is self employed | 4.98 | 0.11 | 2.71 | 2.00 | 3.00 | 4.50 | 6.50 | 9.00 |
| P.MEMPLS | Partner has medium prof.status | 5.63 | 0.06 | 2.65 | 2.50 | 3.75 | 5.25 | 7.50 | 9.50 |
| P.HEMPLS | Partner has high prof.status | 5.24 | 0.14 | 2.57 | 2.00 | 3.25 | 5.00 | 7.00 | 8.75 |
| P.CIT.Y | Partner is Yugoslavian citizen | 4.66 | 0.23 | 2.37 | 2.01 | 2.75 | 4.00 | 6.00 | 8.02 |
| P.CIT.T | Partner is Turkish citizen | 4.87 | 0.40 | 2.82 | 1.75 | 2.31 | 4.35 | 7.25 | 10.00 |
| HOMEOWN | Is HH owner of dwelling? [D] | 5.37 | 0.05 | 2.63 | 2.25 | 3.50 | 5.00 | 7.00 | 9.00 |
| HOME2OWN | Has HH second dwelling? [D] | 6.00 | 0.13 | 2.85 | 2.50 | 3.75 | 5.75 | 8.00 | 9.75 |
| CAROWN | Does HH own a car? [D] | 5.37 | 0.04 | 2.66 | 2.25 | 3.50 | 5.00 | 7.00 | 9.00 |
| CAR2OWN | Does HH own a second car? [D] | 5.02 | 0.07 | 2.60 | 2.00 | 3.00 | 4.50 | 6.50 | 8.75 |
| DISABLED | | | | | | | | | |
| | Disabled? - no disabled person in HH | 5.55 | 0.04 | 2.69 | 2.25 | 3.50 | 5.25 | 7.25 | 9.25 |
| | Disabled? - temporary help needed | 5.54 | 0.24 | 2.83 | 2.75 | 3.75 | 5.00 | 7.25 | 10.23 |
| | Disabled? - permanent help needed | 5.24 | 0.18 | 2.32 | 2.25 | 3.50 | 5.00 | 6.75 | 8.68 |
| | Disabled? - bounded to bed | 5.05 | 0.31 | 2.45 | 1.74 | 2.55 | 5.50 | 7.25 | 8.46 |
| PHELP.H | HH receives paid help for HP & CC | 5.65 | 0.19 | 2.71 | 2.50 | 3.75 | 5.00 | 7.25 | 9.50 |
| UHELP.H | HH receives unpaid help for HP & CC | 4.96 | 0.14 | 2.64 | 2.00 | 3.00 | 4.50 | 6.28 | 8.50 |
| GHELP.H | HH gives HP&CC-help to other HH | 6.04 | 0.12 | 2.86 | 2.75 | 3.75 | 5.75 | 8.00 | 10.25 |
| HELP.P | Person gives HP&CC-help to other HH | 5.98 | 0.14 | 2.66 | 2.75 | 3.75 | 5.75 | 7.75 | 9.75 |
| CITY | City [D] | 5.87 | 0.06 | 2.78 | 2.50 | 3.75 | 5.50 | 7.75 | 9.75 |
| LANDSIDE | Landside [D] | 5.79 | 0.10 | 2.70 | 2.75 | 3.75 | 5.50 | 7.50 | 9.50 |
| WESTERN | Western Area (V,T,Sbg) | 5.85 | 0.08 | 2.77 | 2.50 | 3.75 | 5.50 | 7.75 | 9.75 |
| CIT.Y | Yugoslavian Citizen | 4.85 | 0.25 | 2.40 | 1.75 | 3.25 | 4.00 | 6.50 | 8.25 |
| CIT.T | Turkish citizen | 4.90 | 0.40 | 2.83 | 1.75 | 2.25 | 4.50 | 7.25 | 10.00 |
| C2.D | D:children in HH aged up to 2 | 4.95 | 0.09 | 2.30 | 2.25 | 3.25 | 4.65 | 6.25 | 8.50 |
| C2_3.D | D:children in HH aged 2-3y | 4.75 | 0.12 | 2.41 | 2.04 | 3.00 | 4.25 | 6.25 | 8.50 |
| C4_6.D | D:children in HH aged 4-6y | 4.90 | 0.11 | 2.47 | 2.25 | 3.21 | 4.25 | 6.61 | 8.25 |
| C7_10.D | D:children in HH aged 7-10y | 5.00 | 0.09 | 2.51 | 2.25 | 3.25 | 4.50 | 6.50 | 8.50 |
| C11_15.D | D:children in HH aged 11-15y | 5.03 | 0.09 | 2.46 | 2.25 | 3.25 | 4.50 | 6.50 | 8.50 |
| C7_15.D | D:children in HH aged 7-15y | 5.06 | 0.07 | 2.46 | 2.25 | 3.25 | 4.50 | 6.50 | 8.50 |
| C16-18.D | D:children in HH aged 16-18y | 4.97 | 0.11 | 2.52 | 2.00 | 3.00 | 4.50 | 6.50 | 8.75 |
| C16_20.D | D:children in HH aged 16-20y | 5.04 | 0.09 | 2.46 | 2.00 | 3.25 | 4.50 | 6.50 | 8.50 |
| C21_27.D | D:children in HH aged 21-27y | 5.25 | 0.09 | 2.56 | 2.25 | 3.25 | 4.75 | 6.75 | 8.75 |
| ICC | At least one child not in ICC | 5.15 | 0.08 | 2.54 | 2.25 | 3.25 | 4.75 | 6.50 | 8.75 |
| ICC.FT | (All) child(ren) in fulltime ICC | 4.52 | 0.25 | 2.39 | 1.75 | 2.61 | 3.50 | 5.97 | 8.25 |
| ICC.PT | (At least one) child in parttime ICC | 5.12 | 0.19 | 2.64 | 2.00 | 3.00 | 4.50 | 7.25 | 9.00 |
| ALL | | 5.53 | 0.04 | 2.68 | 2.25 | 3.50 | 5.25 | 7.25 | 9.25 |

Appendix - Table 25: Active Leisure by Covariates; MALES

| Covariate | Description | Mean | SE | StdDev | P 10 | P 25 | P 50 | P 75 | P 90 |
|------------|---------------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| AGE | Age (10-years steps) | | | | | | | | |
| | 20 - 29 | 5.79 | 0.12 | 3.02 | 2.25 | 3.50 | 5.00 | 7.50 | 10.50 |
| | 30 - 39 | 5.74 | 0.09 | 3.04 | 2.50 | 3.50 | 5.00 | 7.50 | 10.50 |
| | 40 - 49 | 5.94 | 0.09 | 3.10 | 2.50 | 3.75 | 5.25 | 7.75 | 10.75 |
| | 50 - 59 | 6.34 | 0.11 | 3.42 | 2.50 | 3.75 | 5.50 | 8.75 | 11.75 |
| | 60 - 69 | 8.35 | 0.12 | 3.26 | 4.00 | 5.75 | 8.40 | 10.75 | 12.75 |
| | 70 - 79 | 8.76 | 0.15 | 3.03 | 4.75 | 6.50 | 9.00 | 11.25 | 12.75 |
| | 80 - 89 | 8.84 | 0.25 | 2.67 | 5.25 | 6.63 | 8.77 | 11.00 | 12.32 |
| ED | Education Level | | | | | | | | |
| | no education level received [D] | 6.55 | 0.05 | 3.34 | 2.75 | 4.00 | 5.75 | 9.00 | 11.50 |
| | compulsory level (Pflichtschule) | 6.66 | 0.09 | 3.41 | 2.75 | 4.00 | 6.00 | 9.25 | 11.75 |
| | apprenticeship (Lehrabschluss) | 6.59 | 0.06 | 3.30 | 2.75 | 4.00 | 5.75 | 9.00 | 11.75 |
| | vocational school (BMS) | 6.24 | 0.17 | 3.33 | 2.50 | 3.96 | 5.50 | 8.42 | 11.25 |
| | A-grade (AHS-Matura) | 6.92 | 0.23 | 3.45 | 2.75 | 4.25 | 6.50 | 9.25 | 11.87 |
| | A-grade (BHS-Matura) | 6.09 | 0.16 | 3.16 | 2.50 | 3.75 | 5.50 | 8.25 | 10.50 |
| | A-Grade | 6.39 | 0.13 | 3.29 | 2.50 | 4.00 | 5.75 | 8.75 | 11.50 |
| | University degree (Uni-Abschluss) | 6.54 | 0.19 | 3.40 | 3.00 | 3.50 | 5.75 | 9.25 | 11.17 |
| SEMPLS | Self employed [D] | 5.81 | 0.12 | 3.14 | 2.50 | 3.50 | 4.75 | 7.50 | 10.75 |
| MEMPLS | medium professional status [D] | 6.64 | 0.06 | 3.33 | 2.75 | 4.00 | 6.00 | 9.00 | 11.75 |
| HEMPLS | high professional status [D] | 6.36 | 0.17 | 3.31 | 2.74 | 3.50 | 5.75 | 8.71 | 11.75 |
| ED.HIGHA | person has significantly higher education compared to partner | 6.39 | 0.14 | 3.30 | 2.50 | 4.00 | 5.50 | 8.75 | 11.00 |
| ED.LOWER | person has significantly lower education compared to partner | 6.63 | 0.19 | 3.37 | 2.60 | 4.25 | 5.75 | 9.25 | 11.50 |
| P.SEMPLS | Partner is self employed | 5.67 | 0.13 | 3.20 | 2.25 | 3.50 | 4.75 | 7.50 | 11.00 |
| P.MEMPLS | Partner has medium prof.status | 6.40 | 0.07 | 3.28 | 2.50 | 4.00 | 5.75 | 8.50 | 11.50 |
| P.HEMPLS | Partner has high prof.status | 6.93 | 0.46 | 3.54 | 3.00 | 3.86 | 6.07 | 10.00 | 12.19 |
| P.CIT.Y | Partner is Yugoslavian citizen | 6.35 | 0.27 | 2.82 | 3.25 | 4.25 | 5.27 | 8.75 | 10.50 |
| P.CIT.T | Partner is Turkish citizen | 6.96 | 0.45 | 3.54 | 2.83 | 4.00 | 6.02 | 10.46 | 11.75 |
| HOMEOWN | Is HH owner of dwelling? [D] | 6.29 | 0.06 | 3.30 | 2.50 | 3.75 | 5.50 | 8.75 | 11.25 |
| HOME2OWN | Has HH second dwelling? [D] | 7.11 | 0.15 | 3.39 | 2.75 | 4.50 | 6.50 | 10.25 | 11.75 |
| CAROWN | Does HH own a car? [D] | 6.33 | 0.05 | 3.29 | 2.50 | 4.00 | 5.50 | 8.50 | 11.25 |
| CAR2OWN | Does HH own a second car? [D] | 5.97 | 0.09 | 3.28 | 2.50 | 3.50 | 5.25 | 8.00 | 11.25 |
| DISABLED | | | | | | | | | |
| | Disabled? - no disabled person in HH | 6.55 | 0.05 | 3.34 | 2.75 | 4.00 | 5.75 | 9.00 | 11.50 |
| | Disabled? - temporary help needed | 6.72 | 0.25 | 3.13 | 3.50 | 4.50 | 5.50 | 9.14 | 11.60 |
| | Disabled? - permanent help needed | 6.69 | 0.27 | 3.62 | 2.00 | 3.75 | 6.00 | 9.50 | 12.09 |
| | Disabled? - bounded to bed | 5.92 | 0.36 | 3.04 | 2.25 | 3.25 | 5.75 | 8.50 | 9.25 |
| PHHELP.H | HH receives paid help for HP & CC | 6.28 | 0.22 | 3.20 | 2.50 | 3.77 | 5.25 | 9.00 | 10.75 |
| UHHELP.H | HH receives unpaid help for HP & CC | 5.98 | 0.16 | 3.08 | 2.50 | 3.75 | 5.50 | 8.40 | 10.34 |
| GHELP.H | HH gives HP&CC-help to other HH | 7.29 | 0.14 | 3.49 | 3.00 | 4.50 | 6.50 | 10.25 | 12.50 |
| HELP.P | Person gives HP&CC-help to other HH | 7.11 | 0.23 | 3.61 | 3.00 | 4.09 | 6.00 | 10.25 | 12.51 |
| CITY | City [D] | 6.95 | 0.07 | 3.30 | 3.08 | 4.50 | 6.25 | 9.25 | 11.75 |
| LANDSIDE | Landside [D] | 6.86 | 0.12 | 3.32 | 3.24 | 4.25 | 6.25 | 9.25 | 11.75 |
| WESTERN | Western Area (V,T,Sbg) | 6.80 | 0.08 | 3.26 | 3.00 | 4.25 | 6.25 | 9.25 | 11.50 |
| CIT.Y | Yugoslavian Citizen | 5.74 | 0.25 | 2.86 | 2.25 | 3.50 | 4.75 | 8.50 | 10.25 |
| CIT.T | Turkish citizen | 6.84 | 0.46 | 3.57 | 2.80 | 4.00 | 4.75 | 10.44 | 11.75 |
| C2.D | D:children in HH aged up to 2 | 5.43 | 0.11 | 2.89 | 2.25 | 3.25 | 4.75 | 7.00 | 9.71 |
| C2_3.D | D:children in HH aged 2-3y | 5.58 | 0.13 | 2.95 | 2.25 | 3.50 | 4.75 | 7.55 | 9.98 |
| C4_6.D | D:children in HH aged 4-6y | 5.42 | 0.11 | 2.88 | 2.50 | 3.25 | 4.75 | 7.25 | 9.50 |
| C7_10.D | D:children in HH aged 7-10y | 5.85 | 0.10 | 3.05 | 2.50 | 3.75 | 5.00 | 8.00 | 10.50 |
| C11_15.D | D:children in HH aged 11-15y | 5.83 | 0.10 | 3.16 | 2.50 | 3.50 | 5.00 | 7.25 | 11.00 |
| C7_15.D | D:children in HH aged 7-15y | 5.85 | 0.08 | 3.09 | 2.50 | 3.75 | 5.00 | 7.50 | 10.50 |
| C16-18.D | D:children in HH aged 16-18y | 6.07 | 0.13 | 3.22 | 2.75 | 3.75 | 5.25 | 8.25 | 11.00 |
| C16_20.D | D:children in HH aged 16-20y | 5.98 | 0.10 | 3.19 | 2.50 | 3.75 | 5.25 | 7.75 | 11.00 |
| C21_27.D | D:children in HH aged 21-27y | 6.25 | 0.11 | 3.20 | 2.75 | 4.00 | 5.50 | 8.50 | 11.25 |
| ICC | At least one child not in ICC | 5.82 | 0.09 | 3.11 | 2.50 | 3.50 | 5.00 | 7.75 | 10.75 |
| ICC.FT | (All) child(ren) in fulltime ICC | 5.98 | 0.25 | 2.67 | 2.57 | 4.00 | 5.50 | 8.50 | 10.00 |
| ICC.PT | (At least one) child in parttime ICC | 5.92 | 0.19 | 2.94 | 2.75 | 3.96 | 5.25 | 7.54 | 10.12 |
| ALL | | 6.55 | 0.05 | 3.34 | 2.75 | 4.00 | 5.75 | 9.00 | 11.50 |

A 2.6 Recreation and Personal Care

Appendix - Table 26: OLS on Recreation and Personal Care; FEMALES

| | Estimate | Std. Error | t value | Pr(> t) | |
|--------------------|------------|------------|----------|----------|-----|
| (Intercept) | 1.046e+01 | 2.945e-01 | 35.515 | < 2e-16 | *** |
| WEEKEND | 8.392e-01 | 5.298e-02 | 15.838 | < 2e-16 | *** |
| AGE | -6.470e-02 | 1.218e-02 | -5.310 | 1.14e-07 | *** |
| I (AGE^2) | 9.406e-04 | 1.316e-04 | 7.147 | 1.00e-12 | *** |
| ED.APP | -7.988e-02 | 5.610e-02 | -1.424 | 0.154524 | |
| ED.VOC | -1.687e-01 | 7.221e-02 | -2.336 | 0.019533 | * |
| ED.MAT | -3.285e-02 | 1.045e-01 | -0.314 | 0.753239 | |
| ED.UNI | -1.159e-01 | 1.410e-01 | -0.822 | 0.411298 | |
| SEMPLS | -2.400e-01 | 7.288e-02 | -3.293 | 0.000998 | *** |
| HEMPLS | -5.140e-02 | 2.432e-01 | -0.211 | 0.832622 | |
| P.AGEDIF | 9.966e-03 | 4.537e-03 | 2.196 | 0.028105 | * |
| ED.HIGHA | 5.976e-02 | 1.149e-01 | 0.520 | 0.603082 | |
| P.SEMPLS | 2.190e-05 | 7.794e-02 | 0.000281 | 0.999776 | |
| P.MEMPLS | 1.407e-02 | 5.338e-02 | 0.264 | 0.792051 | |
| P.HEMPLS | -5.474e-03 | 1.038e-01 | -0.053 | 0.957929 | |
| P.CIT.Y | -7.026e-01 | 4.938e-01 | -1.423 | 0.154819 | |
| P.CIT.T | -5.350e-01 | 9.287e-01 | -0.576 | 0.564598 | |
| HOMEOWN | 4.079e-02 | 6.323e-02 | 0.645 | 0.518836 | |
| HOMESIZE | -7.866e-05 | 6.519e-04 | -0.121 | 0.903958 | |
| HOME2OWN | 1.003e-01 | 8.038e-02 | 1.247 | 0.212279 | |
| CAROWN | -5.669e-02 | 5.864e-02 | -0.967 | 0.333747 | |
| CAR2OWN | -1.993e-01 | 5.556e-02 | -3.587 | 0.000338 | *** |
| DISAPERS | 2.710e-01 | 4.328e-02 | 6.261 | 4.10e-10 | *** |
| PHELP.H | 1.138e-01 | 1.262e-01 | 0.902 | 0.366904 | |
| UHELP.H | 1.505e-02 | 8.737e-02 | 0.172 | 0.863265 | |
| CITY | 4.796e-02 | 8.258e-02 | 0.581 | 0.561437 | |
| LANDSIDE | -5.808e-02 | 8.396e-02 | -0.692 | 0.489140 | |
| WESTERN | -1.377e-02 | 5.412e-02 | -0.254 | 0.799248 | |
| CIT.Y | 5.703e-01 | 4.978e-01 | 1.146 | 0.251994 | |
| CIT.T | 1.614e+00 | 9.407e-01 | 1.716 | 0.086169 | . |
| C2.D | -7.456e-03 | 8.621e-02 | -0.086 | 0.931085 | |
| C2_3.D | -5.983e-02 | 9.489e-02 | -0.630 | 0.528419 | |
| C4_6.D | -9.200e-02 | 7.563e-02 | -1.216 | 0.223860 | |
| C7_10.D | -1.696e-01 | 6.244e-02 | -2.717 | 0.006612 | ** |
| C11_15.D | -7.451e-02 | 5.822e-02 | -1.280 | 0.200675 | |
| C16_20.D | 6.659e-03 | 5.877e-02 | 0.113 | 0.909801 | |
| C21_27.D | -1.574e-02 | 6.620e-02 | -0.238 | 0.812061 | |
| ICC.FT | -8.714e-02 | 1.872e-01 | -0.465 | 0.641616 | |
| ICC.PT | -7.988e-03 | 1.210e-01 | -0.066 | 0.947350 | |
| in.working.ageTRUE | -9.024e-02 | 1.012e-01 | -0.891 | 0.372816 | |
| HWAGE2 | 2.051e-04 | 1.031e-03 | 0.199 | 0.842344 | |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 1.595 on 5522 degrees of freedom
(20 observations deleted due to missingness)
Multiple R-Squared: 0.1578, Adjusted R-squared: 0.1517
F-statistic: 25.86 on 40 and 5522 DF, p-value: < 2.2e-16

Appendix - Table 27: OLS on Recreation and Personal Care; MALES

| | Estimate | Std. Error | t value | Pr(> t) | |
|--------------------|------------|------------|---------|----------|-----|
| (Intercept) | 11.2624823 | 0.3590046 | 31.371 | < 2e-16 | *** |
| WEEKEND | 1.0514276 | 0.0632901 | 16.613 | < 2e-16 | *** |
| AGE | -0.0699759 | 0.0149740 | -4.673 | 3.04e-06 | *** |
| I (AGE^2) | 0.0011045 | 0.0001535 | 7.197 | 6.99e-13 | *** |
| ED.APP | -0.2139092 | 0.0647597 | -3.303 | 0.000962 | *** |
| ED.VOC | -0.4582968 | 0.1139440 | -4.022 | 5.84e-05 | *** |
| ED.MAT | -0.2839333 | 0.1282511 | -2.214 | 0.026877 | * |
| ED.UNI | -0.4130137 | 0.1588173 | -2.601 | 0.009332 | ** |
| SEMPLS | -0.1431201 | 0.0846578 | -1.691 | 0.090975 | . |
| HEMPLS | 0.1334742 | 0.1237770 | 1.078 | 0.280927 | |
| P.AGEDIF | 0.0073532 | 0.0055693 | 1.320 | 0.186788 | |
| ED.HIGHA | -0.1334839 | 0.1127677 | -1.184 | 0.236580 | |
| P.SEMPLS | -0.2548020 | 0.0899757 | -2.832 | 0.004644 | ** |
| P.MEMPLS | -0.1189929 | 0.0628826 | -1.892 | 0.058503 | . |
| P.HEMPLS | -0.5880482 | 0.2907115 | -2.023 | 0.043143 | * |
| P.CIT.Y | 0.6039492 | 0.5940642 | 1.017 | 0.309369 | |
| P.CIT.T | 2.2061517 | 1.1249749 | 1.961 | 0.049921 | * |
| HOMEOWN | 0.0378855 | 0.0754394 | 0.502 | 0.615549 | |
| HOMESIZE | -0.0011508 | 0.0007790 | -1.477 | 0.139673 | |
| HOME2OWN | -0.0244099 | 0.0959976 | -0.254 | 0.799292 | |
| CAROWN | -0.3366146 | 0.0702032 | -4.795 | 1.67e-06 | *** |
| CAR2OWN | -0.1391517 | 0.0664132 | -2.095 | 0.036195 | * |
| DISAPERS | 0.4640419 | 0.0518615 | 8.948 | < 2e-16 | *** |
| PHELP.H | -0.0301608 | 0.1516790 | -0.199 | 0.842390 | |
| UHELP.H | -0.1635062 | 0.1042624 | -1.568 | 0.116888 | |
| CITY | -0.1975745 | 0.0982523 | -2.011 | 0.044386 | * |
| LANDSIDE | 0.1256872 | 0.1002107 | 1.254 | 0.209811 | |
| WESTERN | -0.0972282 | 0.0646216 | -1.505 | 0.132490 | |
| CIT.Y | -0.7295814 | 0.5894438 | -1.238 | 0.215863 | |
| CIT.T | -1.1048245 | 1.1102848 | -0.995 | 0.319740 | |
| C2.D | -0.0339946 | 0.1023641 | -0.332 | 0.739831 | |
| C2_3.D | -0.0546670 | 0.1135156 | -0.482 | 0.630123 | |
| C4_6.D | -0.1555891 | 0.0903799 | -1.722 | 0.085216 | . |
| C7_10.D | -0.1346477 | 0.0747039 | -1.802 | 0.071534 | . |
| C11_15.D | 0.0193578 | 0.0697415 | 0.278 | 0.781356 | |
| C16_20.D | -0.0137736 | 0.0700490 | -0.197 | 0.844126 | |
| C21_27.D | -0.0078416 | 0.0778336 | -0.101 | 0.919754 | |
| ICC.FT | 0.0050174 | 0.2232358 | 0.022 | 0.982069 | |
| ICC.PT | -0.0429517 | 0.1445641 | -0.297 | 0.766392 | |
| in.working.ageTRUE | -0.3013861 | 0.1231663 | -2.447 | 0.014437 | * |
| HWAGE2 | 0.0001229 | 0.0008869 | 0.139 | 0.889809 | |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

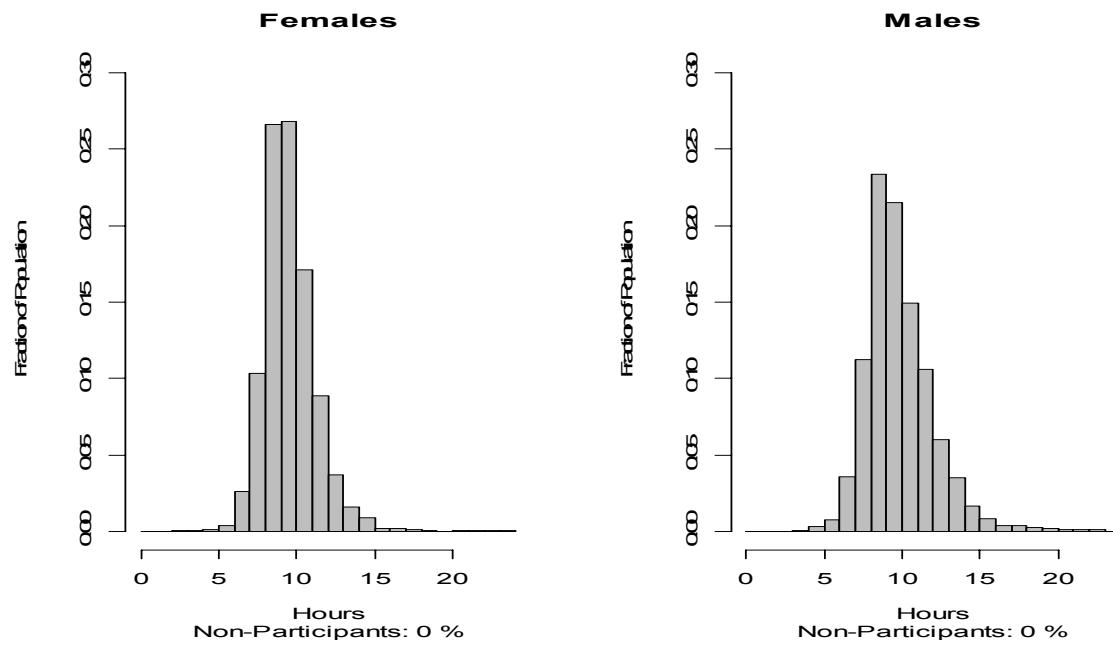
Residual standard error: 1.906 on 5522 degrees of freedom

(18 observations deleted due to missingness)

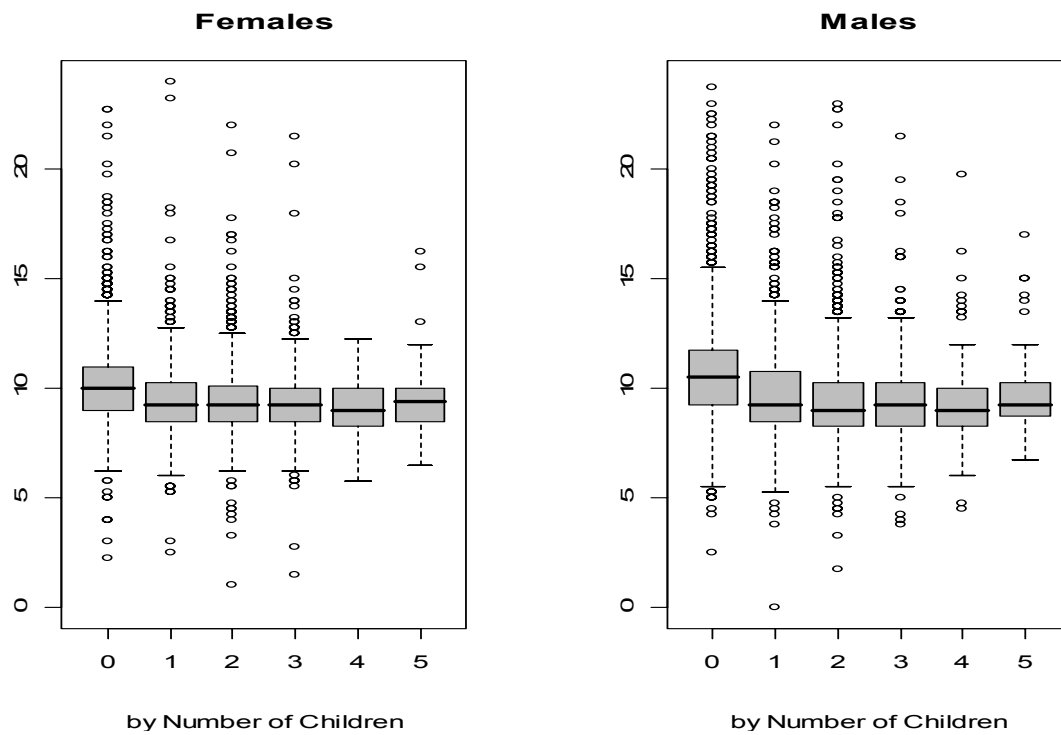
Multiple R-Squared: 0.2576, Adjusted R-squared: 0.2522

F-statistic: 47.89 on 40 and 5522 DF, p-value: < 2.2e-16

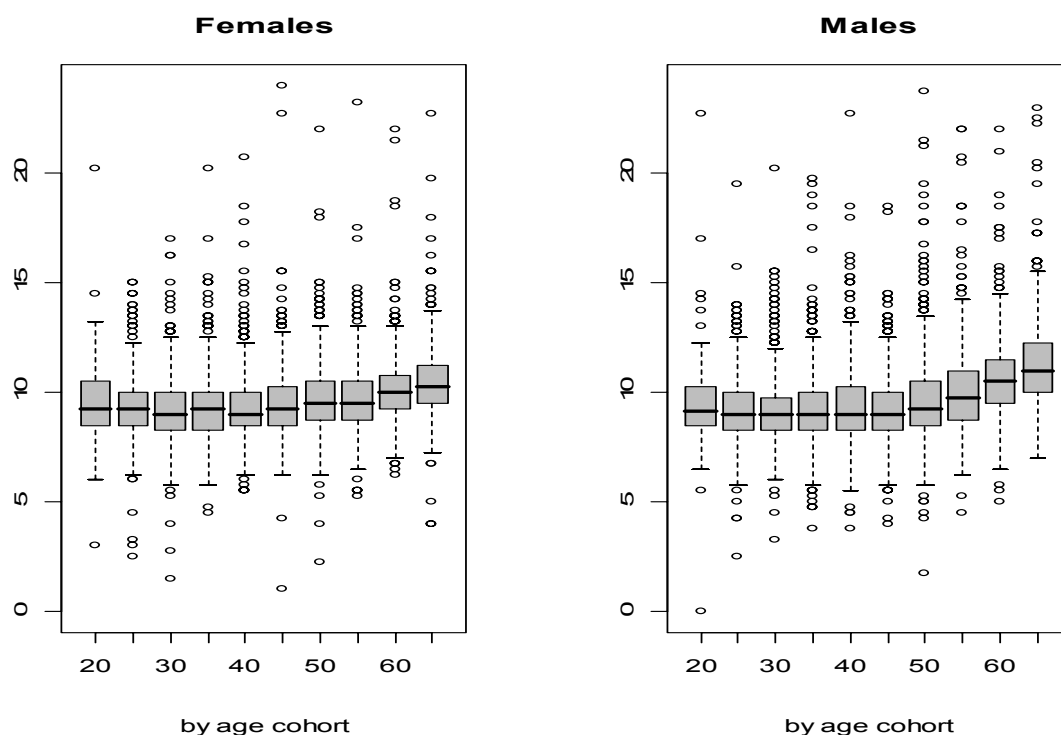
Appendix - Figure 19: Intensity-Distribution of Personal Care and Recreation



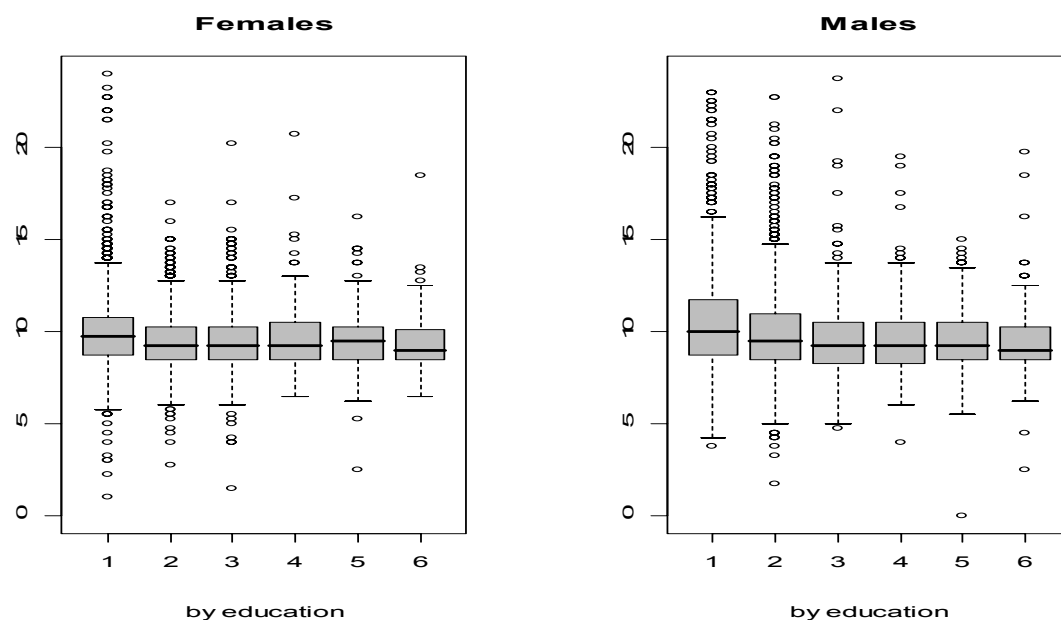
Appendix - Figure 20: Recreation and Personal Care by Number of Children



Appendix - Figure 21: Recreation and Personal Care by Age Cohort



Appendix - Figure 22: Recreation and Personal Care by Education⁵¹



⁵¹ scale: 1: Compulsory level
4: A-grade

2: Apprenticeship
5: A-grade (tech & comm)

3: Vocational level
6: Academic level

Appendix - Table 28: Recreation and Personal Care by Covariates; FEMALES

| Covariate | Description | Mean | SE | StdDev | P 10 | P 25 | P 50 | P 75 | P 90 |
|------------|---------------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|
| AGE | Age (10-years steps) | | | | | | | | |
| | 20 - 29 | 9.39 | 0.06 | 1.66 | 7.75 | 8.50 | 9.25 | 10.00 | 11.25 |
| | 30 - 39 | 9.37 | 0.05 | 1.53 | 7.75 | 8.50 | 9.25 | 10.25 | 11.25 |
| | 40 - 49 | 9.46 | 0.06 | 1.72 | 7.75 | 8.50 | 9.25 | 10.50 | 11.50 |
| | 50 - 59 | 9.68 | 0.06 | 1.64 | 7.75 | 8.75 | 9.50 | 10.50 | 11.50 |
| | 60 - 69 | 10.39 | 0.07 | 1.79 | 8.50 | 9.50 | 10.25 | 11.00 | 12.25 |
| | 70 - 79 | 10.92 | 0.10 | 1.65 | 9.00 | 9.69 | 11.00 | 11.75 | 13.00 |
| | 80 - 89 | 12.37 | 0.33 | 2.54 | 9.00 | 10.00 | 12.43 | 14.98 | 15.00 |
| ED | Education Level | | | | | | | | |
| | no education level received [D] | 9.71 | 0.03 | 1.76 | 7.75 | 8.50 | 9.50 | 10.50 | 11.75 |
| | compulsory level (Pflichtschule) | 9.81 | 0.04 | 1.85 | 8.00 | 8.75 | 9.75 | 10.75 | 12.00 |
| | apprenticeship (Lehrabschluss) | 9.67 | 0.05 | 1.60 | 7.75 | 8.50 | 9.50 | 10.50 | 11.75 |
| | vocational school (BMS) | 9.61 | 0.07 | 1.86 | 7.75 | 8.50 | 9.25 | 10.50 | 12.00 |
| | A-grade (AHS-Matura) | 9.86 | 0.14 | 2.01 | 8.00 | 8.75 | 9.29 | 10.75 | 12.25 |
| | A-grade (BHS-Matura) | 9.54 | 0.11 | 1.57 | 8.00 | 8.50 | 9.25 | 10.25 | 11.50 |
| | A-Grade | 9.70 | 0.09 | 1.80 | 8.00 | 8.75 | 9.25 | 10.50 | 11.75 |
| | University degree (Uni-Abschluss) | 9.32 | 0.09 | 1.35 | 7.75 | 8.50 | 9.25 | 10.25 | 10.75 |
| SEMPLS | Self employed [D] | 9.57 | 0.08 | 1.81 | 7.75 | 8.50 | 9.25 | 10.50 | 11.50 |
| MEMPLS | medium professional status [D] | 9.58 | 0.04 | 1.68 | 7.75 | 8.50 | 9.50 | 10.50 | 11.50 |
| HEMPLS | high professional status [D] | 9.31 | 0.18 | 1.32 | 7.47 | 8.50 | 9.01 | 10.25 | 11.50 |
| ED.HIGHA | person has significantly higher education compared to partner | 9.65 | 0.10 | 1.58 | 8.00 | 8.54 | 9.50 | 10.15 | 12.00 |
| ED.LOWER | person has significantly lower education compared to partner | 9.77 | 0.08 | 1.86 | 7.75 | 8.75 | 9.50 | 10.71 | 11.75 |
| P.SEMPLS | Partner is self employed | 9.68 | 0.07 | 1.81 | 7.75 | 8.50 | 9.25 | 10.50 | 11.75 |
| P.MEMPLS | Partner has medium prof.status | 9.63 | 0.03 | 1.63 | 7.75 | 8.50 | 9.50 | 10.50 | 11.50 |
| P.HEMPLS | Partner has high prof.status | 9.56 | 0.10 | 1.82 | 7.75 | 8.50 | 9.25 | 10.50 | 11.75 |
| P.CIT.Y | Partner is Yugoslavian citizen | 9.27 | 0.14 | 1.48 | 7.75 | 8.50 | 9.18 | 10.00 | 11.00 |
| P.CIT.T | Partner is Turkish citizen | 9.66 | 0.26 | 1.86 | 8.00 | 8.50 | 9.00 | 10.98 | 11.99 |
| HOMEOWN | Is HH owner of dwelling? [D] | 9.70 | 0.03 | 1.76 | 8.00 | 8.50 | 9.50 | 10.50 | 11.75 |
| HOME2OWN | Has HH second dwelling? [D] | 9.82 | 0.08 | 1.70 | 8.00 | 8.71 | 9.75 | 10.50 | 12.00 |
| CAROWN | Does HH own a car? [D] | 9.59 | 0.03 | 1.66 | 7.75 | 8.50 | 9.50 | 10.50 | 11.50 |
| CAR2OWN | Does HH own a second car? [D] | 9.36 | 0.04 | 1.53 | 7.50 | 8.25 | 9.25 | 10.25 | 11.25 |
| DISABLED | | | | | | | | | |
| | Disabled? - no disabled person in HH | 9.63 | 0.02 | 1.63 | 7.75 | 8.50 | 9.50 | 10.50 | 11.50 |
| | Disabled? - temporary help needed | 10.81 | 0.20 | 2.42 | 8.00 | 9.00 | 10.50 | 12.00 | 14.41 |
| | Disabled? - permanent help needed | 10.68 | 0.22 | 2.83 | 7.75 | 8.76 | 10.25 | 11.75 | 14.00 |
| | Disabled? - bounded to bed | 10.65 | 0.38 | 3.04 | 8.25 | 8.75 | 9.75 | 10.95 | 16.25 |
| PHELP.H | HH receives paid help for HP & CC | 10.02 | 0.18 | 2.55 | 8.00 | 8.75 | 9.50 | 10.75 | 14.50 |
| UHELP.H | HH receives unpaid help for HP & CC | 9.59 | 0.12 | 2.27 | 7.50 | 8.50 | 9.25 | 10.50 | 11.52 |
| GHELP.H | HH gives HP&CC-help to other HH | 9.66 | 0.06 | 1.53 | 8.00 | 8.50 | 9.50 | 10.50 | 11.50 |
| HELP.P | Person gives HP&CC-help to other HH | 9.64 | 0.08 | 1.51 | 8.00 | 8.75 | 9.50 | 10.50 | 11.75 |
| CITY | City [D] | 9.80 | 0.04 | 1.79 | 7.75 | 8.75 | 9.50 | 10.75 | 12.00 |
| LANDSIDE | Landside [D] | 9.74 | 0.06 | 1.63 | 8.00 | 8.75 | 9.50 | 10.75 | 12.00 |
| WESTERN | Western Area (V,T,Sbg) | 9.73 | 0.05 | 1.75 | 7.75 | 8.50 | 9.50 | 10.50 | 12.00 |
| CIT.Y | Yugoslavian Citizen | 9.26 | 0.15 | 1.42 | 7.75 | 8.50 | 9.00 | 10.00 | 11.00 |
| CIT.T | Turkish citizen | 9.72 | 0.26 | 1.83 | 8.00 | 8.50 | 9.00 | 11.03 | 12.00 |
| C2.D | D:children in HH aged up to 2 | 9.37 | 0.06 | 1.47 | 7.75 | 8.50 | 9.25 | 10.25 | 11.00 |
| C2_3.D | D:children in HH aged 2-3y | 9.33 | 0.08 | 1.60 | 7.50 | 8.50 | 9.25 | 10.25 | 11.25 |
| C4_6.D | D:children in HH aged 4-6y | 9.20 | 0.07 | 1.60 | 7.75 | 8.50 | 9.00 | 10.00 | 11.00 |
| C7_10.D | D:children in HH aged 7-10y | 9.29 | 0.06 | 1.58 | 7.75 | 8.50 | 9.00 | 10.00 | 11.25 |
| C11_15.D | D:children in HH aged 11-15y | 9.43 | 0.05 | 1.49 | 7.75 | 8.50 | 9.25 | 10.25 | 11.25 |
| C7_15.D | D:children in HH aged 7-15y | 9.35 | 0.04 | 1.54 | 7.75 | 8.50 | 9.25 | 10.25 | 11.25 |
| C16-18.D | D:children in HH aged 16-18y | 9.51 | 0.07 | 1.66 | 7.75 | 8.25 | 9.25 | 10.50 | 11.75 |
| C16_20.D | D:children in HH aged 16-20y | 9.48 | 0.06 | 1.66 | 7.50 | 8.50 | 9.25 | 10.50 | 11.50 |
| C21_27.D | D:children in HH aged 21-27y | 9.57 | 0.06 | 1.56 | 7.50 | 8.50 | 9.50 | 10.50 | 11.41 |
| ICC | At least one child not in ICC | 9.44 | 0.05 | 1.60 | 7.75 | 8.50 | 9.25 | 10.50 | 11.25 |
| ICC.FT | (All) child(ren) in fulltime ICC | 9.49 | 0.16 | 1.51 | 8.22 | 8.50 | 9.25 | 10.25 | 11.93 |
| ICC.PT | (At least one) child in parttime ICC | 9.18 | 0.11 | 1.55 | 7.75 | 8.25 | 9.00 | 10.25 | 11.00 |
| ALL | | 9.71 | 0.03 | 1.76 | 7.75 | 8.50 | 9.50 | 10.50 | 11.75 |

Appendix - Table 29: Recreation and Personal Care by Covariates; MALES

| Covariate | Description | Mean | SE | StdDev | P 10 | P 25 | P 50 | P 75 | P 90 |
|------------|---------------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|
| AGE | Age (10-years steps) | | | | | | | | |
| | 20 - 29 | 9.38 | 0.08 | 1.92 | 7.50 | 8.25 | 9.25 | 10.25 | 11.50 |
| | 30 - 39 | 9.28 | 0.05 | 1.82 | 7.50 | 8.25 | 9.00 | 10.25 | 11.75 |
| | 40 - 49 | 9.37 | 0.05 | 1.87 | 7.25 | 8.25 | 9.00 | 10.25 | 11.75 |
| | 50 - 59 | 9.85 | 0.07 | 2.23 | 7.50 | 8.50 | 9.50 | 11.00 | 12.25 |
| | 60 - 69 | 10.89 | 0.08 | 2.03 | 8.75 | 9.75 | 10.50 | 11.75 | 13.25 |
| | 70 - 79 | 11.56 | 0.11 | 2.24 | 9.25 | 10.25 | 11.00 | 12.50 | 14.22 |
| | 80 - 89 | 12.66 | 0.25 | 2.72 | 9.32 | 10.75 | 12.30 | 14.25 | 16.95 |
| ED | Education Level | | | | | | | | |
| | no education level received [D] | 9.90 | 0.03 | 2.20 | 7.75 | 8.50 | 9.50 | 11.00 | 12.50 |
| | compulsory level (Pflichttschule) | 10.48 | 0.07 | 2.42 | 8.00 | 8.75 | 10.00 | 11.72 | 13.50 |
| | apprenticeship (Lehrabschluss) | 9.80 | 0.04 | 2.08 | 7.50 | 8.50 | 9.50 | 11.00 | 12.25 |
| | vocational school (BMS) | 9.67 | 0.12 | 2.38 | 7.50 | 8.25 | 9.25 | 10.50 | 12.00 |
| | A-grade (AHS-Matura) | 9.76 | 0.15 | 2.15 | 7.73 | 8.25 | 9.37 | 10.75 | 13.00 |
| | A-grade (BHS-Matura) | 9.46 | 0.10 | 1.91 | 7.25 | 8.25 | 9.25 | 10.50 | 12.25 |
| | A-Grade | 9.57 | 0.08 | 2.01 | 7.50 | 8.25 | 9.25 | 10.50 | 12.25 |
| | University degree (Uni-Abschluss) | 9.27 | 0.10 | 1.73 | 7.52 | 8.25 | 9.00 | 10.25 | 11.27 |
| SEMPLS | Self employed [D] | 9.69 | 0.08 | 2.01 | 7.50 | 8.50 | 9.25 | 10.50 | 12.00 |
| MEMPLS | medium professional status [D] | 9.72 | 0.04 | 2.06 | 7.50 | 8.50 | 9.50 | 11.00 | 12.25 |
| HEMPLS | high professional status [D] | 9.64 | 0.11 | 2.06 | 7.65 | 8.25 | 9.00 | 10.50 | 12.50 |
| ED.HIGHA | person has significantly higher education compared to partner | 9.46 | 0.09 | 2.11 | 7.50 | 8.25 | 9.25 | 10.25 | 12.00 |
| ED.LOWER | person has significantly lower education compared to partner | 9.76 | 0.12 | 2.22 | 7.50 | 8.50 | 9.25 | 11.00 | 12.04 |
| P.SEMPLS | Partner is self employed | 9.69 | 0.08 | 2.05 | 7.50 | 8.25 | 9.25 | 10.75 | 12.25 |
| P.MEMPLS | Partner has medium prof.status | 9.57 | 0.04 | 1.97 | 7.50 | 8.25 | 9.25 | 10.50 | 12.00 |
| P.HEMPLS | Partner has high prof.status | 8.96 | 0.18 | 1.42 | 7.00 | 7.75 | 9.00 | 10.00 | 10.50 |
| P.CIT.Y | Partner is Yugoslavian citizen | 9.51 | 0.21 | 2.17 | 7.50 | 8.25 | 9.25 | 10.25 | 11.25 |
| P.CIT.T | Partner is Turkish citizen | 10.64 | 0.36 | 2.84 | 7.75 | 8.79 | 9.75 | 12.48 | 15.00 |
| HOMEOWN | Is HH owner of dwelling? [D] | 9.92 | 0.04 | 2.19 | 7.75 | 8.50 | 9.50 | 11.00 | 12.50 |
| HOME2OWN | Has HH second dwelling? [D] | 9.84 | 0.09 | 1.95 | 7.75 | 8.50 | 9.50 | 11.00 | 12.25 |
| CAROWN | Does HH own a car? [D] | 9.66 | 0.03 | 2.03 | 7.50 | 8.25 | 9.50 | 10.75 | 12.00 |
| CAR2OWN | Does HH own a second car? [D] | 9.50 | 0.05 | 1.92 | 7.50 | 8.25 | 9.25 | 10.50 | 12.00 |
| DISABLED | Disabled? - no disabled person in HH | 9.79 | 0.03 | 2.04 | 7.50 | 8.50 | 9.50 | 11.00 | 12.25 |
| | Disabled? - temporary help needed | 11.13 | 0.28 | 3.40 | 8.15 | 8.41 | 10.25 | 12.25 | 16.99 |
| | Disabled? - permanent help needed | 11.33 | 0.25 | 3.29 | 8.00 | 9.00 | 10.53 | 12.75 | 15.98 |
| | Disabled? - bounded to bed | 10.96 | 0.38 | 3.19 | 8.08 | 8.63 | 10.92 | 11.75 | 15.25 |
| PHHELP.H | HH receives paid help for HP & CC | 10.00 | 0.19 | 2.76 | 7.72 | 8.25 | 9.25 | 10.75 | 13.75 |
| UHHELP.H | HH receives unpaid help for HP & CC | 9.63 | 0.13 | 2.59 | 7.50 | 8.25 | 9.25 | 10.25 | 12.34 |
| GHELP.H | HH gives HP&CC-help to other HH | 9.96 | 0.09 | 2.31 | 7.50 | 8.50 | 9.75 | 11.00 | 12.25 |
| HELP.P | Person gives HP&CC-help to other HH | 9.66 | 0.14 | 2.19 | 7.75 | 8.47 | 9.25 | 10.75 | 11.50 |
| CITY | City [D] | 9.83 | 0.05 | 2.16 | 7.75 | 8.50 | 9.50 | 11.00 | 12.25 |
| LANDSIDE | Landside [D] | 9.86 | 0.08 | 2.27 | 7.75 | 8.50 | 9.50 | 11.00 | 12.50 |
| WESTERN | Western Area (V,T,Sbg) | 9.79 | 0.05 | 2.08 | 7.50 | 8.50 | 9.50 | 11.00 | 12.25 |
| CIT.Y | Yugoslavian Citizen | 9.57 | 0.18 | 2.02 | 7.50 | 8.25 | 9.50 | 10.50 | 11.25 |
| CIT.T | Turkish citizen | 10.45 | 0.34 | 2.66 | 7.75 | 8.81 | 9.75 | 12.25 | 13.44 |
| C2.D | D:children in HH aged up to 2 | 9.28 | 0.07 | 1.79 | 7.25 | 8.25 | 9.00 | 10.25 | 11.50 |
| C2_3.D | D:children in HH aged 2-3y | 9.38 | 0.08 | 1.82 | 7.25 | 8.25 | 9.00 | 10.25 | 11.75 |
| C4_6.D | D:children in HH aged 4-6y | 9.07 | 0.07 | 1.85 | 7.00 | 7.87 | 9.00 | 9.75 | 11.25 |
| C7_10.D | D:children in HH aged 7-10y | 9.30 | 0.06 | 1.74 | 7.50 | 8.25 | 9.00 | 10.00 | 11.75 |
| C11_15.D | D:children in HH aged 11-15y | 9.53 | 0.06 | 1.93 | 7.50 | 8.25 | 9.25 | 10.50 | 12.00 |
| C7_15.D | D:children in HH aged 7-15y | 9.42 | 0.05 | 1.85 | 7.50 | 8.25 | 9.25 | 10.25 | 11.75 |
| C16-18.D | D:children in HH aged 16-18y | 9.69 | 0.09 | 2.29 | 7.50 | 8.25 | 9.25 | 10.50 | 12.25 |
| C16_20.D | D:children in HH aged 16-20y | 9.65 | 0.07 | 2.21 | 7.50 | 8.25 | 9.25 | 10.50 | 12.25 |
| C21_27.D | D:children in HH aged 21-27y | 9.88 | 0.07 | 2.14 | 7.75 | 8.50 | 9.75 | 11.00 | 12.25 |
| ICC | At least one child not in ICC | 9.51 | 0.06 | 1.99 | 7.25 | 8.25 | 9.25 | 10.50 | 12.00 |
| ICC.FT | (All) child(ren) in fulltime ICC | 9.43 | 0.19 | 1.99 | 7.50 | 8.00 | 9.00 | 10.75 | 13.00 |
| ICC.PT | (At least one) child in parttime ICC | 9.18 | 0.11 | 1.77 | 7.00 | 8.25 | 9.00 | 10.00 | 11.25 |
| ALL | | 9.90 | 0.03 | 2.20 | 7.75 | 8.50 | 9.50 | 11.00 | 12.50 |

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